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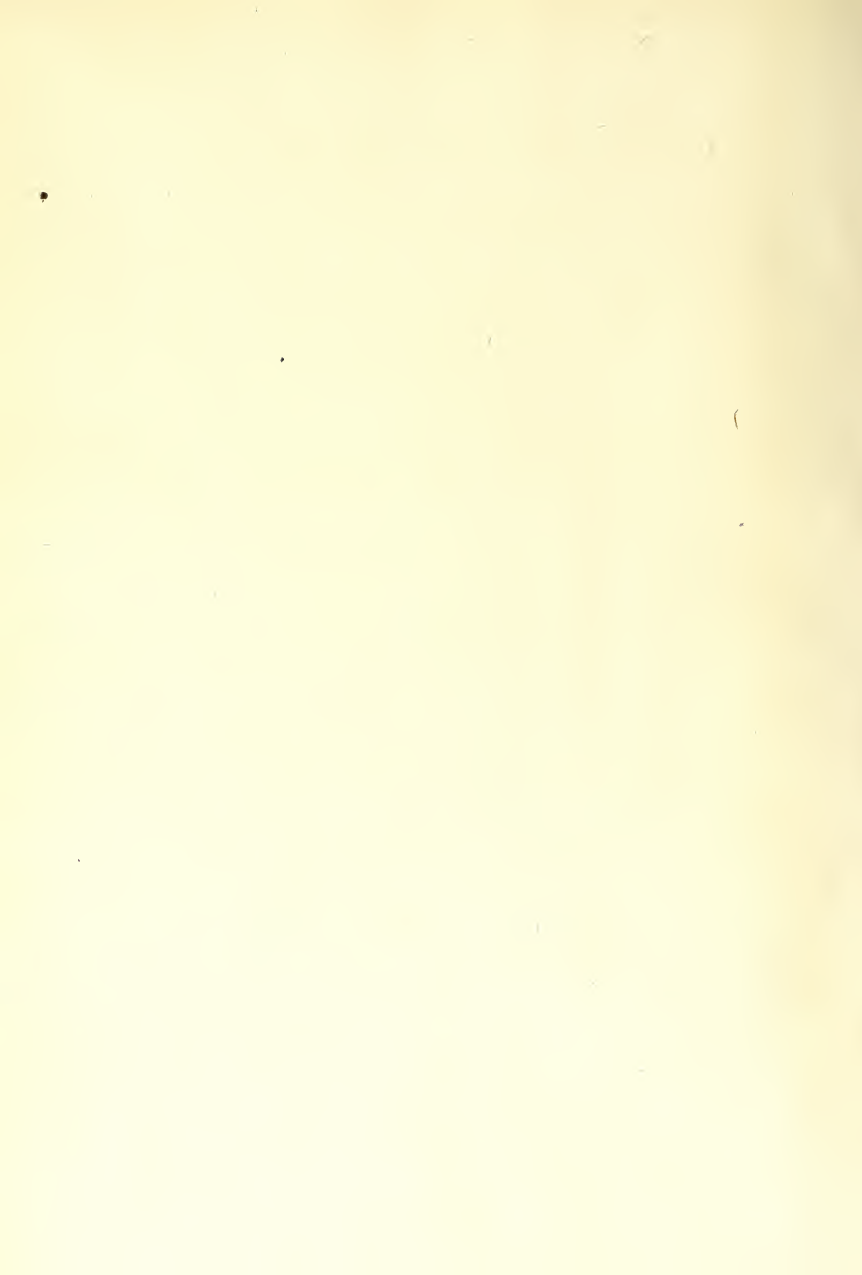


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OF

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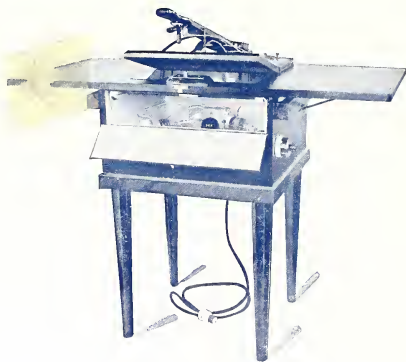
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The American Journal of Photography



BOSTON, U.S.A.



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No. 1

Technical Knowledge Behind the Photo-Counter



It is about a dozen years ago that PHOTO-ERA, editorially, advised that photo-dealers encourage practical technical knowledge among their salesmen. We pointed out, at the time, the importance of such information to the salesman endeavoring to make a sale of a high-priced equipment not only in the interests of the proprietor of the store but in forming and maintaining pleasant relations between the salesman and customer. We went further, and recommended that the proprietor offer his salesmen opportunities to become expert in photographic practices, pay their dues in camera clubs, grant them opportunities to test cameras out-of-doors in a practical way, etc. We are glad to see that *The Photographic Dealer*, in a recent issue, publishes an article—signed “Technician”—along these lines. We reprint it with pleasure and hope that it will make an impression. Moreover, we hope that readers who may not have received the best of service will call the photo-dealer’s or his assistant’s attention to this article.

“Should a sound general knowledge of practical photography be required of salesmen and dealers’ assistants? After many years’ connection with the dealing and finishing business, I am of opinion that such knowledge would be of three-fold value. It would assure greater satisfaction to customers, it would ease and simplify the practical man’s work, and it would increase the firm’s reputation and profits. This would be particularly advantageous and effective in large concerns where shop-counters and darkrooms are out of immediate touch with each other, perhaps in separate buildings or even in different towns, for it is in such cases that intercourse between salesmen and darkroom-operators is so apt to cause delay, annoyance and disappointment.

The presence or absence of technical knowledge on the part of customer or salesman is very noticeable—in effect—in the workshop. Its presence facilitates a smooth, even flow of work,

free of chance jobs and other knotty problems. Its absence is capable of causing a delay any moment. Enlarging-orders, treatment of negatives, complaints and queries—all afford opportunities for technical knowledge in the shop, to show to advantage.

Perhaps, a few actual cases of its absence may make this clear. A customer gave an order for a 12 x 10 from a 1A film, the subject, a seashore-snap, showing two figures situated almost at each end of the negative. The order was booked and passed to the workshop. When it reached the enlarger, he was confronted with the following problem. Did the customer require a straight 12 x 10—which was impossible—or a 12 x 7, which was not exactly what he ordered? Dare he—the enlarger—cut off either end of the picture to make a 12 x 10? If so, which end? Dare he add to the sky? Almost certainly one or other end, or perhaps the sky, was of paramount importance to the customer, and therefore the rest of the negative might be sacrificed to make a picture, but to find out the facts would mean starting enquiries and delaying the work instead of getting it done. He could, of course, use his own discretion, which might or might not coincide with the customer’s ideas. Had the salesman considered the technical possibilities of the negative, the vague order for an impossible 12 x 10 might have been a quite feasible 15 x 9 or 20 x 13, or a pictorial enlargement of any size or shape.

Orders concerning poor negatives are likely to be very unsatisfactory, if the salesman cannot or does not advise the customer technically.

I have known negatives to be sent in for intensifying and others for reducing which could be spoiled only by the treatment ordered. ‘Brick-wall’ negatives and uranium-toned films are received for gaslight prints. (The necessary exposure may be half an hour at a 1,000 c.p. lamp.) Thin, washy negatives are sent in for ‘soft bromide’ or, perhaps, sepia prints.

Customers sometimes return developing-orders complaining of underdevelopment. Unless the

shop-assistant is competent to distinguish between underdevelopment and underexposure, the matter must be referred to the works. This means delay. In such a case, the shopman has an advantage over the workman, for besides the negatives he has—or can obtain at first hand—all relative data.

Occasionally, the sale of a camera or lantern is the cause of an unnecessary appeal to the darkroom. A purchaser of an expensive camera once complained that his negatives were never sharp, in spite of careful focusing. He was asked to call back in a few days, and meanwhile the instrument was sent to the works to be tested. A skilled man wasted an hour, but could find no fault. He concluded from the negatives that they had been taken glass-side to the lens, which happened to be correct. The salesman might have settled the matter on the spot and economized his own, the customer's and the workman's time.

Now the above may sound harsh on salesmen, but I am not without sympathy. I have

handled the public myself and know from experience the trials of a shop-counter. Admittedly, it is no great pleasure to act as buffer between customer and workshop. Further, I know salesmen and assistants who give intelligent photographic consideration to orders, and I also know darkroom and workshop people who do not; but that's another story.

At the same time, when a customer gets the benefit of technical knowledge, *when giving his order*, he is flattered by the attention, the firm profits by his increased order, the darkroom is relieved of a problem, and the salesman benefits by the appreciation of all three.

How is the salesman to acquire practical knowledge? It is a question for both the salesman and his employer, for though much information can be gained from technical literature, the particular kind of knowledge wanted can best be obtained in the workshop. If shopmen were allowed to spend part of their time in the works (not necessarily working) it might be to everyone's advantage."

Architectural Traditions for the Photographer

Colonial Architecture

EDWARD LEE HARRISON



THE early settlers of New England and Virginia brought with them the germs of English domestic architecture of the Georgian period. And, if to-day we have in America a national architectural style, it is unquestionably that same Georgian period, developed and modified into what has been popularly termed—Colonial Architecture.

Rarely is anything seen more beautiful than a well-designed Colonial dwelling, properly set at the focus of a country-estate. Beautiful buildings in this style have been designed and built amid city-scenes; but the true spirit of the Colonial design is implied in its nomenclature—it is a suburban style and belongs amid green lawns and spreading foliage.

The South, with its sunny clime and its reputation for wide-armed hospitality, offers a peculiarly fitting field for the Colonial mansion. One of the most beautiful residences we have ever seen is situated in Memphis, Tennessee, in the center of a magnificent park that occupies sixteen ordinary city-blocks. Tall poplars stand four-square about the estate, like a military guard

on watch, and through the branches of the trees and shrubs—culled from every clime—the white gleam of the mansion's fluted columns reminds one of the fabled villa of Hadrian. At the main gateway to the grounds lie two sculptured lions in white Italian marble; one of the lions appears to be asleep, while his fellow fixes his unflinching gaze ever athwart the path.

Possibly the most striking feature, architecturally, concerning the Colonial style, is its absolute symmetry, when properly designed. This direct inheritance from the classic Greek and Roman orders produces the very charming photographic effects, particularly in the case of details. Another prominent characteristic may be found in the carefully-worked-out conventionality of the portico and cornice-soffits, which, when properly designed—according to classic precedent—present splendid material for detail-photographs; and, indeed, in this respect Colonial Architecture is far ahead of many of our ultra-modern styles which in many cases present a very unsatisfactory appearance when viewed in perspective. The photographer who attempts, we will say, to portray one of our suburban



TERRACE LAWN
WISTARIA GARDENS
EDWARD LEE HARRISON



COLONIAL PORTICO EDWARD L. HARRISON

Colonial residences, situated on an estate of moderate size, will find the subject interesting to a degree; but somewhat different in character from problems in other architectural styles.

In the first place, the Colonial residence presents a most difficult color-scheme for photography. It is in many cases built of wood, painted white, having weather-boarded walls, with divided windows and green blinds,—latted and vine-clad, perchance. Again, it may have walls of red brick laid in white mortar, with white wood-cornice and porticoes, fluted columns, and the inevitable green blinds. To the eye, these cleverly balanced compositions of dark green, bright red and dazzling white, gleaming amid a brilliant setting of foliage and flowers, traced about with red or white walkways, are lovely. But, unfortunately, the lens does not take kindly to the aforesaid bright colors, and considerable strategy is required to produce successful pictures.

The ray-filter and the color-sensitive plate or film are indispensable, and advantage may also

be taken of various other tricks of the trade. But the real secret of reconciling the sharp contrasts of colonial work, must be sought in the lighting—the time of day—the weather, and the season of the year. Many times the soft light of a cloudy day will reconcile the hard contrasts, albeit at the expense of distinctive shadows, and “cloudy” effects are particularly good in this style. Then, again, slanting lights have saved many a difficult subject, by lessening sharp reflections and casting foliage-shadows over in-temperate gradations of light.

We will indicate a case in point. Recently, the owner of “Terrace Lawn,” a stately Georgian residence in the suburbs of one of our large southern cities, quietly let it be known that he would pay a cash-bonus of fifty dollars to the photographer who would present the best view of his fine residence. The offer tempted several luckless artists of the lens and shutter, among them the author. Indeed, the problem was interesting from an academic standpoint, as well as for commercial reasons.

The residence, it chanced, was entirely white, the walls being white stucco—rough-cast—and the woodwork a gleaming white, also the retaining wall and the walks were white. The roof was of unpainted redwood-shingles, there were no blinds and the foliage was not very plentiful.

Most of the photographers tried to make close-up views, with wide-angle lenses, and obtained much detail in strong sunlight. The effects were sharp and cold, and far from home-like. After one or two unsuccessful trials of the same sort, the writer appeared on the scene one morning when the sun was shining very slantingly on the house.

The long shadows cast by the foliage, aided by the rough grain of the stucco, gave the walls a neutral tint, and the greater part of the roof was shadowed by the trees. Taking up a position across the street with a 3-A Graflex, we selected a 7-inch Series II Velostigmat, and using a 3-time color-screen, we obtained a view which had a certain amount of color. At the same time, we avoided the bald, unframed effect that the views, made from the lawn itself, must necessarily possess.

An enlargement about five feet long, on rough bromide paper, was made, and colored in pale tints, carefully graded from sketches and notes made on the premises. In this way a little further “dodging” was possible, and the final result—framed in mahogany and gold at a venture, by the dealer who had posted the owner’s offer—was far ahead of the professional views, and was accepted instantly by the client, who came to the store at the dealer’s request.



HAMPSTEAD MANOR
RESIDENCE-SKETCH
EDWARD LEE HARRISON

Combination-Printing



It is sometimes necessary to combine portions of two or more photographs to form one print. Although rather troublesome work, it is usually fairly remunerative and, if properly done, adds to the prestige of the photographer in the eyes of his patrons. Perhaps the most usual task is inserting an extra figure in a group, and next to that the addition or substitution of a background to a figure, building, or other object. With the general adoption of bromide printing, the older style of printing by means of a careful system of masking the negatives has almost fallen into desuetude; but at one time, very fine examples were shown by the late H. P. Robinson, Robert Slingsby, and many others, the earliest practitioner, probably, being O. G. Rejlander, whose celebrated allegory, "The Two Ways of Life," was printed on one sheet of paper from no fewer than forty different negatives. I possessed a copy of this picture, now, unfortunately, faded to invisibility, and can certify to the complete success of the method. It is hardly necessary to say that this process can be carried out only upon a printing-out paper on which the image is fully visible, so that the masks can be properly adjusted. A hint by Mr. Robinson worth repeating is that, if possible, joins should not be made on the outlines of figures; this, however, can rarely be acted upon unless the original negatives are specially made with this very important end in view.

An easier method, and one which I have employed with considerable success, was introduced by Mr. T. Edge. It is especially useful for small work, and only requires a steady hand and a little skill in using a sable-brush. The procedure is as follows:—Suppose it is wished to place a landscape background behind a figure photographed against a brick-wall, the background in the figure-negative is very carefully blocked out with opaque, so that it will print with a perfectly white background. A print is made upon a printing-out paper, either gelatine or collodion. (I have used most brands of Solio as well as Seltona and Paget Self-toning.) The figure if small is carefully painted over with gamboge water-color, so that all light-action is obstructed, care being taken to keep very exactly to the outline of the subject. When dry, the figure is adjusted in the desired position upon the landscape-negative which is to form the background, and this is printed to its proper depth, taking care that it is rather on the light side. All that has now to be done, is to wash off the gamboge with plenty of clean water and to tone and fix in the usual way.

No other color than genuine gamboge is suitable, as not only does it leave no stain upon the paper, but it has no effect upon the unfixed image. It is, of course, necessary to paint the image over by artificial light or to use a yellow blind with daylight. If large images have to be dealt with, only about a quarter of an inch margin need be "gamboged," the remainder being covered with an opaque paper-mask, which may be attached to the negative with a touch of rubber-solution. It is manifestly impossible to employ this method with bromide paper for contact-printing; but a modified form may be used for enlargements.

The figure-negative, having been blocked out so as to print with a white background, is placed in the enlarger and focused to the desired size upon a piece of card, upon which the outline is carefully traced in pencil. This is accurately cut out and fixed upon a sheet of glass at least as large as the finished enlargement is to be. The bromide paper is next pinned up and an exposure made for the figure. This is developed with a rather weak developer, until the outline is clearly visible, and well rinsed. Meanwhile, the landscape-negative is put into the enlarger with the yellow cap on; the faint image is now pinned up so that it comes into its correct position on the background, and the mask (supported on the glass) fixed up so as to protect it. There should be a slight distance between the glass and the paper so as to avoid a sharp join. The exposure having been given for the landscape, development proceeds as usual. Some practice is necessary to ensure good results, and great cleanliness is needed to avoid stains. Test-exposures must be made for both figure- and background-negatives, so that the depth of color is evenly balanced in the combined print.

The insertion of skies and foregrounds is a more simple matter, as these may be vignetted in by means of masks cut approximately to the desired outlines. If pencil-marks are made on the margins of the bromide paper to show how far the foreground and sky negatives are to be allowed to cover, it will not be found necessary to develop the print partly as a guide. If preferred, push-pins may be used to mark the limits of the various exposures; but I favor the pencil-marks, as it is sometimes necessary to shift the paper on the easel in order to bring the required portion of the sky into position.

The most generally practised method of combination-printing is what may be called the patch-work-way. This is both easy and efficacious, as there is no question of registration. Let us suppose that an additional figure is to be intro-



IN WINTER'S GRASP
RUPERT BRIDGE



WHEN EVENING-SHADOWS FALL

GEORGE W. FRENCH

duced into a group. The first step is to make a print of this figure exactly the correct size to range with the other members of the group. This is then cut out with scissors and pasted into position on the group-print. If the cut edges show as white lines, they must be darkened with a little spotting-color. The next step is to copy the whole thing, and to make the final prints, either by contact or in the enlarger from this negative. I have made a little modification in this process which I think has some advantages. After cutting out the figure which is to be added, I soak it and the group in water until quite limp, place them together in position, and then squeegee down upon a clear piece of glass. By doing this, any unevenness of surface is avoided and the join is much less in evidence; there is also a great saving in time, and no cardboard is needed for mounting. It may perhaps be useful to give details of an actual piece of work. I received a postcard film-negative of a lady reclining in a bathing-dress, and an engraving showing a somewhat similar female on the edge of the surf with huge waves breaking a little further back. My task was to produce a similar effect in whole-plate size from the film-negative. Fortunately, a number of negatives of waves were available, and I easily found a suitable one. From this I made

a 12 x 10 bromide enlargement on smooth paper. Next I made an enlargement from the film on the same brand of paper. When these were dry, I did what was necessary in the way of finishing with lead-pencil. I then cut out the figure, soaked it and the wave-picture and floated them into position under water. They were then squeegeed down face to a clear glass, and copied through the glass, the negative being the desired whole-plate. The whole operation, excluding drying, took about two hours.

Some very expert photographers manage to combine negatives by scratching a clear space upon one and transferring into this space a portion of film from another negative, the stripping being effected by means of hydrofluoric acid. While good results can be obtained in this way, it is not one for the every-day worker who wants to use materials and methods in ordinary use. Nor can I endorse the advice sometimes given to join up film-negatives by cutting to shape and cementing upon glass. This method has given in my hands a more noticeable join than almost any other.

For the beginner I recommend the "patch-work-way"; it is most generally employed for press-work, and requires little practice to get good results.—*The British Journal*.

What Photography Has Done For Me

MICHAEL GROSS



HAVE just returned from a celebration of my tenth anniversary as a photo-fan. As I sit here and, in memory, turn back ten leaves in the great book of Time, I see myself once more as a timid, trembling initiate in the Realm of the Ruby-Lamp. Through the golden haze of retrospection, I thrill again at the sight of my first correctly-exposed plate—crisp and contrasty, and all a-sparkle with high-light and shadow. Another visioning, and my first toned and fixed silver-print, reddish brown and rich in depth and tone, appears from out the vista of time. And so, in turn, appear before me my first successful flashlight-photograph, my first enlargement, my first platinum-print and all the other great mile-stones of progress in my initial journey with camera and tripod.

And as these, my successes, pass in solemn, silent review before me, I pause and ponder the many joys that traveling the path of the photographic plate has brought to me—and also the deep sorrows, of the many occasions of high elation, heavy gloom and bitter disappointment.

But in the ten-year account of my servitude the weight—as you shall see—lies heavily on the profit-side; for here, step by step and entry by entry, is an itemized statement of what photography has done for me.

It has taught me to seek companionship in the solitudes and silent places of Nature; to find balm in the still voice of earth and her waters and the depths of air; to hear with joy the myriad voices of the forest and dell—the call of the robin and the murmur of the brook; the chirp of the cricket and the sigh of the wind as it passes over the trees. And because the continuous buying of photographic materials kept my purse flattened, I have found that the woodland was the only place left for me to go on Sunday—because it was the least expensive.

It has taught me the rudiments of chemistry and physics; to know the boiling-point of water—and the frilling-point of developer; to know of queer-sounding chemicals and awe-inspiring compounds—of their virtues and of their power. It has placed the mixing of formulae at my fingertips—and the evidence of each mixing on my finger-nails.

It has taught me to see new beauties in Nature's handiwork and in the work of man. A winding road, a group of poplars, a setting sun, a giant suspension-bridge at dusk—all these

things, in the light of my photographic knowledge, have taken on a new and more glorious significance. The pursuit of photography has enabled me to see the hidden beauty in things outwardly ugly and has spurred me on in the effort of registering this beauty indelibly on the sensitive photographic plate for the enjoyment and edification of my fellow-man.

It has taught me the wonders of light; to appreciate the power that lies dormant in a single beam of the sun—except when it comes unexpectedly into the darkroom. It has brought me into the coolness of God's open air—and into the stuffiness of a clothes-closet developing-chamber.

It has raised me to heights of joy such as are reached by but few mortals, merely at the sight of a beautifully timed negative as I lifted it out of the hypo and brought it into daylight. And it has plunged me into depths of gloom deeper than the Hades of Dante, when a careless elbow of an inquisitive little brother has flipped that same beautifully timed negative off the drying-rack and sent it to the floor broken beyond repair.

It has taught me the three cardinal virtues of photography—exactness, carefulness and cleanliness. Exactness, because the variation of a second's time in exposure meant a spoiled plate; carefulness, because the stirring in of one chemical before another in the preparation of a formula meant precipitation and a spoiled mixture; cleanliness, because the clothes-closet filled with empty plate-boxes and the bath-tub marred by developer-stains meant an irate outbreak of the heads of the family and an amateur photographer's spoiled disposition.

It has taught me the rudiments of housework. The cleaning of trays has grounded me in the mysteries of dish-washing; the rolling of prints down on a ferrotype-plate has made me a master of the art of flattening out the dough for the morning-bread; cleaning up the kitchen-floor after developing three dozen plates has perfected me in the use of the mop; and clipping films and then hanging the clips over a cord has given me the necessary skill to go out in the yard with the week's wash and a box of clothes-pins and put the finishing-touches to the work. And the fact that I am a master of all these domestic pursuits, makes me feel certain that I will make a good wife to most any girl that comes along.

Last but not least, photography has been to me a pleasure above all pleasures, a hobby of all

hobbies. It has smoothly dovetailed into every other pursuit of pleasure—a proof of veracity in fishing-expeditions; a pleasure for after-years in hunting-trips; a boon-companion when taken for its own sake. It has sent me along the road with eyes open to the beauties about me; it has increased my happiness by bringing me closer to the soil; it has increased my health by furnishing me with an incentive to go out under the open sky and listen unto Nature's teachings; and it

has increased my wealth by making it possible for me to write and sell this article.

All in all, as I sit here and gaze back upon my ten years' journey in the highways and byways of photography, I find I have nothing to regret and much to be thankful for—and I feel that I can recommend the same trip to my fellow-man and experience a warm glow of satisfaction at the thought of the good advice I am giving, and the joy that there is in store for him.

Winter-Landscapes

WILLIAM S. DAVIS



IT is several years since I have written of the making of snow-pictures in the pages of PHOTO-ERA; but in case older readers recall what was said then and feel that there may be some repetition in the advice now given, I will try to forestall criticism by saying that many new workers have joined the ranks, and it is especially for them that these suggestions are written. I assume, to begin with, that they are not the kind who make the mistake of placing their cameras on the top shelf of a cupboard when summer vacation-days are over—there to stay until another year has come around.

The serious worker, sensitive to the beauties of nature, can hardly fail to be impressed by the charm of snow-effects, and may wish to utilize them as pictorial material. This is true, whether it be to catch the sparkle of sunshine upon frosted lace-like trees and bushes; the varied shadow-patterns cast upon the snow; the subtle tonal quality of a scene when the atmosphere is filled with mist from the moist surface of melting snow, or the sterner aspect of open fields and wooded slopes under a dark, stormy sky. Interesting possibilities are also presented during a snowstorm when the air is thick with flying flakes. Every phase affords an opportunity for attractive interpretation; but the inexperienced may make the mistake of choosing, sometimes, unsuitable conditions to make the exposure upon a particular subject. It does not follow that, because so many of nature's changing effects can be utilized easily, they are all adapted to the same kind of material. Some scenes are most impressive on a dull day, and others are dependent entirely for beauty and interest upon the play of sunlight and shadow, so it is for the aspiring pictorialist to learn by

study of different types of subjects what the best working-conditions are for each.

The worker who has grasped the theory of pictorial design sufficiently to recognize the importance of the placing of varied tones within the boundary of the picture, to form a well-balanced and pleasing design will consider at once the possibilities presented by the different-shaped masses of tone, whether these are solid objects or simply transitory effects of sunshine and shadow. However, we may point out that when the natural details of a scene combine into sufficiently attractive lines and tonal units so as to constitute a good pattern, the subject-matter is best photographed under diffused lighting to avoid the introduction of extraneous "effects," which would only break up the original character of the material. On the other hand, should one meet a subject on a gray day which looks promising, but lacks proper balance or displays monotonous tonality, by all means, one should endeavor to revisit the spot when the sun is shining. Visits at various times of day should be made, if possible, in order to study the changes wrought by east shadows and the variations in relative tone-values throughout, which throws one part into a relatively unimportant place in the composition and accents another. "Winter Mist" illustrates a type of composition which often appears best in diffused light. The foreground is broken sufficiently in tone by means of the combination of soft snow, bare earth, and puddles of snow-water over the fields, without the addition of cast shadows, and the large tree in the middle-distance is dark enough to give a note of accent for the lighter tones and balance the massing of half-tones at the right. The result thus becomes virtually a study in flat tone-spotting, including the distant objects and the



FROST-MAGIC

WILLIAM S. DAVIS



SNOW-BOUND

WILLIAM S. DAVIS

sky. Foreground-material similar in character to that shown in this picture, the tracery of bare tree-branches against the sky, or a distant wooded hillside spotted with drifted masses of snow are among the subjects which frequently look well on a dull day when the sky assumes a cold, leaden hue. In the study, called "Wayside Cedars," the presence of sunlight has not altered materially the massing of dark tones against the sky; but the east-shadows in the immediate foreground break up what would otherwise be an oblong mass of flat tone into irregular shapes, and lead the eye toward the stone wall and trees. Sunshine also proved very helpful when making "Snow-Bound," which was obtained after a heavy fall of snow made it necessary to "break out" the road by hand, the chunks of snow thrown up by the shovelers furnishing an interesting foreground feature. On a dull day, though, the details of the broken surface would not have been rendered satisfactorily; but with the sun to one side the play of light and shadow gives solidity and a sense of perspective which leads up to the focal point quite naturally. Incidentally, I would call attention to the light clouds, which frequently add to the beauty of an open landscape, where a considerable amount of sky is shown. "Frost Magic" represents an-

other class of material where sunshine plays an important part in producing the combination of tone-values needed to bring out the sparkle and crystalline quality of ice and snow-covered trees or bushes; but to obtain this effect the sunlight must fall *upon* the subject, preferably from a little to one side. If the subject is seen against a background of sky, the latter needs to be a deep blue, or filled with gray clouds, to afford contrast, and to preserve this as the eyes see it a suitable ray-filter should be employed. Sometimes one may be fortunate enough to see a snow-laden tree-branch, or clump of bushes, with the side of an old gray-shingled house, or dense woods, for a background, in which case the technical problem is rendered much simpler.

The right translation of the various tones is one of the most essential points in snow-photography, because the peculiar charm of a winter-scene lies largely in the extremely delicate tonal gradation produced by the play of light over the uneven surface of the snow or ice, which is often emphasized by being seen in juxtaposition with a series of dark tones. When you are studying relative values, compare one tone with another without regard to differences in color, noting first where the lightest and darkest are located within the limits of the material selected for the com-

position, after which try to determine the approximate relative position which the larger masses of intermediate tones bear to these. Such analysis is very helpful in determining how a particular effect is produced, and why certain combinations are so much more effective than others. As result of such study and its practical application, I have arrived at the following definite conclusions:

as the lighting becomes more diffused, and the tone of the sky may vary from a dark slate-blue hue—which, by the way, makes a striking background for a wild stretch of landscape illustrative of the bleak and somber side of winter—to a grayish-white tint very close to the snow in tone. When the latter condition prevails, it is impossible to get really strong results in an open view; but it does not necessarily spoil one's



WINTER-MIST

WILLIAM S. DAVIS

1. As the feeling of luminosity, or brightness, in a given part, can only be perfectly preserved by avoiding any repetition of the same tone over an extensive area elsewhere in the composition, it is essential when one desires to suggest the brilliancy of sunlit snow to see that such parts constitute the highest lights of the picture. This is in accordance with what is seen in nature under normal lighting; for the blue sky is considerably deeper than snow in full light, but the cast-shadows upon the surface of the latter are usually darker than the sky, especially when the sunlight is very clear. These tonal relationships change somewhat when haze or dark clouds obscure the sun, one of the first things noticed being a flattening of gradation in the tones of the snow and the loss in intensity of cast-shadow

chances in the woods, or wherever little or no sky is required in the composition.

2. Although, as just pointed out, snow in sunlight may be considered normally the highlight in a scene, it is not acceptable to represent any considerable area by white paper in the finished print, because much of its charm is due to the surface-texture and undulations causing very delicate transitions of tone, even upon an unbroken expanse, which can only be rendered by preserving such gradations. These minor gradations are fully brought out when the light falls at a low angle across the surface, either from one side or somewhat toward the observer; and, where the foreground is made the feature of interest, the play of light upon the surface, combined with the shadow-patterns formed

AMERICAN
WINTER



WAYSIDE-CEDARS

WILLIAM S. DAVIS

by trees, fences, etc., may be utilized most effectively.

3. The scale of tones is very long when there are dark objects nearby; but notwithstanding, the deepest shadows should not be rendered as black silhouettes, as this obliterates texture and destroys atmospheric quality. A certain amount of light is always reflected from either sky or snow into the strongest shadows, harmonizing them with their surroundings; and the depth of such tones likewise decreases as they recede from the observer, which enables one to express aerial perspective—or the separation between planes—on a flat surface.

The quality of the lens-image may be made to play quite an important part in the pictorial result when the image is focused visually on a ground-glass before making the exposure; but the matter of sharp or soft definition is such a broad subject and so largely governed by the character of the material as well as by the taste

of the individual worker that it is impossible to more than touch upon it here; but I can say that there is a happy medium between extreme sharpness on one hand and mushy softness of outline on the other which seems best suited to the rendering of an average snow-scene. A sparkling mass of frost-work, or other subject depending upon intricate and delicate detail for effect, naturally requires fairly crisp definition to preserve the quality, and a composition composed of large units of tone, or a misty-day study, will stand considerable diffusion, provided that the individual surface-character of nearer parts—including the textural quality of the snow—is not lost in the process.

Although the technical treatment of snow-subjects demands care and thought, it is by no means so difficult as was the case many years ago, when suitable ray-filters and color-sensitive plates or films were not available. Doubtless, there are some workers who still try to get along

with ordinary emulsions and no filters; and, under a favorable combination of circumstances, succeed in obtaining fairly good results. However, it is foolish to do a thing the most difficult way. Usually, when a really difficult subject is encountered, failure is bound to come, so my advice is to fill your plateholders always with some brand of color-sensitive plates, which should also be backed or a double-coated grade to meet all needs, or else use orthochromatic films. On a gray day, the employment of a ray-filter is generally optional; but in bright sunshine its use is nearly always important in order to obtain a truthful impression of color and tone-values in sunlit snow, blue-violet shadows and sky. When contrasts are great between the highlights and dark objects, a fairly deep filter will prove of the utmost assistance in holding values in the highly actinic lighter parts while a full exposure is given for the deep tones—which nearly always contain the least active colors, photographically. For average requirements, a so-called three-time ray-filter will answer; but in using one of this class, I usually allow an increase of four or five times that which would be given without a filter. If one prefers, very good results similar to those obtained upon regular orthochromatic emulsions with a three-times filter may be had by using one of the popular brands of "self-screen" plates—which are sold under several trade names—and are ready backed, if desired. Our illustration, "Snow-Bound," is a specimen of work on such a plate; but in this instance the absence of deep tones in the foreground made it easier to control the tonal rendering. Where a stronger filter than the grade previously mentioned is wanted, a five- to eight-time should be tried, or one approximately double the depth. This is useful when it is necessary to make the most of pale blue tones, and to hold the lighter parts in check when a very long scale of tones is present.

Owing, no doubt, to the general impression of brilliancy usually felt when looking at a snow-scene in good light, many make the error of timing the exposure to fit the highlights without regard to the darker parts—a procedure fatal to harmonious tonality in the finished picture. Perhaps, this is a tradition handed down from

the days when means were lacking to control readily a long scale of tones; but, as has been pointed out, if the right filter is used in conjunction with color-sensitive emulsions, one can expose sufficiently to obtain the necessary detail in the deeper parts without spoiling the highlights. Consequently, the general rule should be to increase the exposure in proportion to the excess of contrast present above the average, in order that the gradation in the darkest parts of the scene may appear during development of the negative before the highlights have time to block up into dense masses, thus doing away with the temptation to force development. A negative of a first-class snow-scene, when registering correctly a long scale of tones, should show good detail in the strong shadows, yet be thin enough in the highlights so that, when held near the eyes and looked through, any well-lighted object or page of clear type-matter may be distinguished readily. A reliable exposure-meter is very useful to obtain a working-basis for estimating the correct exposure; but unless the subject is a wide-open view without dark objects in the foreground it is not advisable to cut the scale-reading to one-fourth, as is usually advised by the makers. Most landscapes need about one-half the exposure which would be given without snow on the ground; but if there are dark parts filling considerable space in the composition, it is generally better to allow the full-indicated time without regard to the presence of the snow; for it must be remembered that when sensitive paper is used for measuring the intensity of the light, the amount reflected from the snow will in any case have the effect of cutting down the exposure-figures of the meter-reading.

In connection with the subject of exposure, it will not be out of place to mention the need to exercise care in screening the lens from strong reflected light, which might otherwise fog the negative. Any kind of lens-hood is effective which cuts off such light from all sides beyond the angle of view. When plateholders are used, drawing out and replacing the slides under cover of a focusing-cloth will prevent the possibility of stray light reaching the plate through the slot in the end of the holder.



The Airplane in Pictures

LATIMER J. WILSON



NEW inventions do not as a rule lend themselves to artistic adaptation. Modern machinery must be handled with superb skill to be used in a pictorial composition; but that this can be done is shown by such admirable work as that of the Pennell etchings of steel-mills. In photography there may be found examples which

ideal birds of flight speeding across the limitless space of sky offer possibilities to the artist, presenting pictorial effects suggestive of the splendor and grandeur afforded by man's triumph over the domain of the air.

Who is not thrilled by the sight of the strange bird with wings outspread silhouetted against a background of white clouds and blue sky? "How I'd like to be up there! What a magnificent view he must have!" are perhaps the thoughts of many of us. And when opportunity has afforded us a trip above the clouds it is certain that none of the fascination first imagined has been lost in the realization. Flight at two or three thousand feet above the ground is indeed the ideal mode of travel; compared to the prose of the grimy railroad with its tunnels and cindered pathway, the air-route is that of a Pegasus. Familiarity with the ethereal grandeur of pellucid distances and the prismatic refractions of light-in-air, one might expect every airplane-pilot to become either an artist or a poet.

But to make use of the airplane as a part of one's photographic composition demands special consideration on the part of the photographer. The artist actually has less difficulty because he



OVER THE LAKE

LATIMER J. WILSON

also display skill in making pictures out of such prosaic subjects as steam-shovels, railroad-trains, ocean-liners and the latest of all mechanical wizardry, the airplane.

The early types of aircraft such as the box-kite adaptation of criss-cross framework which constituted the first biplanes, certainly were lacking in interesting lines when considered pictorially. But the modern airplane although conforming to the requirements of stream-line construction as an economic value of flight, also conforms to the requirements of beauty. They are designed somewhat after nature, imitating the stream-lines of fish and birds. The airplane-makers have thus been forced to create objects that are beautiful as well as effective. The swift mechan-



OVER THE HILLS

LATIMER J. WILSON

can re-create the impression of a passing scene. It is seldom that the photographic artist has the means to record the passage of an airplane at the time an unusually beautiful effect is presented. Across the big white cloud the machine speeds for an instant, and unless one has his camera all ready and can estimate the path of the pilot's course the result is apt to be disappointing. Fortunately there is a simple means to overcome this difficulty by an application of art to photography. Almost any camera is good enough to catch the speeding airplane showing it in silhouette against a blank sky. The same camera can make excellent separate pictures of

beautiful cloud-effects on days suitable for such photography.

The art comes in combining the two negatives. This can be done best in the process of enlarging. With contrast paper the airplane negative can be printed simultaneously with the cloud-negative to produce results that convey the sensation of man's dizzy flight through cloudland. Sometimes it is best to print first one negative, then the other and to develop both together on the single print. A few experiments will demonstrate the correct duration of exposure, and out of a lot of prints will come one or two that are really beautiful as pictures.

Price Co-operation

EDGAR M. ATKINS

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OW that all business is contending with actively changing conditions and the adjustments incident thereto, it is a most fitting time for the photographic portrait-making profession to arouse itself to the urgent need of better business co-operation.

Although we have our national and amalgamated associations, the benefits derived from them are largely educational. We need also organizations the purpose of which should be to further the interests of the profession in a business-way. Everywhere there are manufacturers' associations, business men's associations, employers' associations for this purpose; and employees of nearly every industry are organized for the purposes of improving their working-conditions and for obtaining a minimum pay for their work. For the same reasons professional men, owners, and managers of photographic businesses should have their local associations. The need of business co-operation is self-evident.

I shall make no attempt to enumerate the many benefits to be derived from local associations; but in every community where they do not exist they should be formed immediately, and the moving spirit should be one of good fellowship, co-operation and mutual help. The question of a minimum price, based on costs at which portrait-photographs should be sold, would be a subject which could properly be brought before such organizations.

I do not believe in hampering healthy business-

competition; but I do believe—and I think the profession will agree with me—that there should be a minimum price, based on costs, at which portrait-photographs should be sold.

To charge a certain price—based on costs—per square inch per dozen prints, would be a business-like way of solving this question. If for individual pictures a minimum price were charged of 25 cents per square inch per dozen prints for 4 x 6's and larger sizes, then the minimum price per dozen for 4 x 6's would be exactly \$6.00; for 5 x 8's, \$10.00; for 6 x 8's, \$12.00; for 6 x 10's, \$15.00; for 8 x 10's, \$20.00; for 10 x 14's, \$35.00, etc. The charge for prints smaller than 4 x 6's should increase somewhat as the size decreases. For instance, as a 3 x 4 print is one-half the size of a 4 x 6, the price per square inch should increase one-half of 25 cents or to 37½ cents, making the minimum price per dozen \$4.50. If so small a size as a 2 x 3 is made, the price should increase over the 3 x 4 rate to not less than \$3.25 per dozen. A liberal discount—say 50%—should be allowed on passport prints, postcards, and similar work on which no proof is shown. Minimum prices once determined, a rate-card could be compiled and supplied which would obviate any possible confusion.

The charge to make group-pictures should increase over the price for individual pictures for 4 x 6's say, 25 cents per print for each additional person more than one, for twelve or more pictures, with an increased charge per person for larger and a decreased charge for smaller sizes.

The price for less than dozen-lots should be, for one picture, one-third of the dozen-price, with one-twelfth of the dozen-price added for each additional print wanted up to one-half dozen, and with one twenty-fourth of the dozen-price added for each print over six up to twelve, with the result that the price for three pictures would be one-half the dozen-price, and for six pictures three-fourths of the dozen-price, and with the final result that twelve pictures on this basis would amount to exactly the dozen-price.

Duplicates: If you have made so good a picture that duplicates are wanted, they should be charged for in dozen lots at the regular dozen-price prevailing at the time. If only a part of a dozen are wanted, the first print should be charged for at one-sixth of the dozen-price with one-twelfth of the dozen-price added for each additional print wanted up to eight, and one-sixteenth of the dozen-price added for the rest up to twelve, with the result that a full dozen figured on this basis would amount to exactly the dozen-price.

This whole plan of charging should be for unmounted prints. At the time of delivery, an

effort should be made to sell as many suitable frames for them as possible, and for the rest of the order, the most suitable folders for those particular prints should be sold at cost plus overhead. For if the customer is given to understand that only a small charge will be made for folders, the chances are improved for selling higher-priced pictures.

The charge for retouching extra negatives could also be figured on the square-inch basis, depending on the size of the print or negative, with an extra charge per person for group-pictures. At 5 cents per square inch for retouching extra negatives, the charge for single heads for 4 x 6's would be, virtually, \$1.25.

I do not maintain that the figures I have used to illustrate with should necessarily be adhered to; but I have proposed herein an easily understood and workable plan. It is a business-like and scientific method of arriving at prices.

The successful application of this plan, of necessity, requires genuine co-operation through local associations, where would be obtained an interchange of ideas and the benefits of just and helpful criticism.

Equipment for Color-Photography

ROBERT M. FANSTONE



ANY beginners in color-photography are inclined to pay too little attention to features desirable in their apparatus, and though the manufacturers of the materials used for various methods frequently state that any ordinary camera may be used, the process itself will be facilitated, and success assured if the photographer carefully examines his apparatus, with a view to its modification, if this is needed, according to the peculiarities of the particular process that he intends to work. I hope, by stating what is desirable in the way of apparatus, to forewarn the beginner against possible pitfalls, and also to assist the advanced worker who is not getting results as good as he desires.

With regard to the camera itself, I have found nothing so suitable as the ordinary view-outfit, and its most desirable feature is rigidity. Exposures for color-photography, even under the most favorable conditions, are long, and if the outfit is not perfectly firm when set up, trouble on this score is likely to occur. I have found that a camera that has never given any trouble

when employed for ordinary out-of-door work, gave badly blurred negatives when used for color-work in the deep shadow of the woodland, when the exposures were very long. Though most generally found upon the modern view-camera, the swing-back and front is a great help in color-work by reason of the fact that they facilitate focusing without stopping down. The value of this will be seen later.

The hand-camera, even when supported on a tripod, leaves much to be desired in the matter of rigidity, and considering that with all the modern color-processes the best result is obtained only with a full exposure, this is hardly in its favor. Of course, I do not mean to infer that good results cannot be obtained with any but a view-camera, but merely as experience has shown me to indicate what is best. Snapshot-exposures, with the camera held in the hand are impossible except under the most favorable conditions.

A shutter is not to be regarded as essential, and may even give trouble from vibration, if the exposures are very long. I always use the lens-cap when the exposure, as it often does,



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runs into twelve seconds, or more, and find that this is superior for long periods to the best of shutters. In the case of roller-blind shutters, operated by a pneumatic release, reliance cannot be placed on the instrument remaining open for a long period at "bulb," and if used at "time," trouble is apt to arise from vibration when pulling down the blind, to start the exposure; hence my preference for the cap.

While on the subject, it is perhaps as well to point out that the rigidity of the tripod should not be overlooked.

One of the most important points that should engage the attention of the color-photographer is, that his plateholders should be suitable for the requirements of the particular process that he is working; but I have known many who have overlooked this altogether. Both the Autochrome and Paget processes differ very consid-

erably in their requirements in the matter of plateholders. With the former process, owing to the extreme delicacy of the surface of the plate—which is exposed glass-side towards the lens—no pressure of springs, or the separating plate of the double plateholders, may be permitted, or an abrasion of the film is certain to result. On the other hand, when working the Paget process, it is not only most important that there should be springs on the plateholder, but also that they do their work effectually, in bringing the negative plate into perfect and entirely uniform contact with the taking screen, in order that a perfect dot formation may be obtained. Neglect of this, which allows of uneven contact between plate and screen, produces a transparency that is color-correct in portions only, and those working the process should pay every attention to this matter which is one upon which the success of the



PRINCE

DAISIE B. CHAPPELL

whole process mainly depends. I prefer, for both Autochrome and Paget color-work, double book-form plateholders or the American block-form holder, in preference to the single metal pattern, by reason of the fact the double plateholder allows ample room for the plate. I have used the single metal-slides for the Autochrome process, taking great care to prevent abrasions of the plate from the back of the slide. This must be quite free of dents, etc. The single metal-slide is not, however, so well adapted for the Paget process, as it is difficult to get the two plates into the space only intended for one, unless the screen and plate are upon the specially thin glass issued by the makers for these slides, but even then there is some doubt about obtaining perfect contact. When carrying Autochromes in double plateholders, I take out the metal-separators and springs and load each plateholder with two plates, using the special cards issued by the makers for this purpose, as separators. For the Paget process I use one plate in each plateholder, owing to the fact that if two exposures were loaded into each plateholder, the four plates would make a very tight fit when the springs are in position, and these would either tend to crack the plates, or to force the plateholder apart at the middle. I insert the screen and plate in the plateholder, taking note which shutter must be drawn for the exposure; upon the back of the plate is laid a piece of dead black card, and on

this the springs; the plateholder is then gently closed, the springs forcing the plates into even contact. Speaking of springs reminds me to mention that the single central spring fitted to the center of the metal holder divisions, is totally inadequate; my own are made from old pieces of clock-spring, covered with black velvet, in order to prevent their seratching. They are about two inches less in length than the width of the plate for a $4\frac{3}{4} \times 6\frac{1}{2}$, are bent into a slightly concave shape, and placed in position in the slide with the ends resting upon the car-separator. They should be about two inches from the top and bottom of the plate. These springs should not be too strong. On one occasion, I unthinkingly used a couple of springs from the back of an old $3\frac{1}{4} \times 4\frac{1}{4}$ printing frame; they forced the holder apart at the middle, and apart from fogging the particular plate, warped the holder very badly.

It is, perhaps, almost superfluous to add that everything inside the camera and plateholder should be perfectly dead black. This is far more important in color-work than in the ordinary branches of photography, since reflected light or halation may cause degradation of color in the finished result.

That the lens is fully color-corrected is of primary importance for all color-photography, and for this reason experience teaches me to favor one of the modern anastigmats in preference to one of



BOYLSTON STREET, BOSTON

HERBERT B. TURNER

the older R.R. pattern, since these may not be so carefully corrected of chromatic aberration. Another great advantage offered by the anastigmat is, that it will cover the plate sharply to the margins without stopping down, which may be necessary with an R.R. or other lens not having a flat field. Stopping down is to be avoided as much as possible, as this in practice tends to produce results that are devoid of the more subtle gradations. I am inclined for this reason to recommend a lens of fairly short focus for the plate in use, owing to the ease with which a subject in different planes may be focused sharply at a large aperture. If, however, the photographer does not possess an anastigmat, an R.R. or good large-aperture portrait-lens will serve. An important point is that the glasses of the lens itself must be free of any trace of discoloration. It sometimes happens that through the decay

of the cementing compound, by reason of damp, improper storage, or other cause, the glasses of some lenses have a decidedly yellow or brown tint, which may upset the carefully adjusted lens-filter. I was asked once why a certain amateur photographer's color-transparencies lacked the brilliant colors that the process was capable of producing, and had instead a brownish tint. After some investigation, the cause was traced to the fact that the lens was a very old and discolored instrument; indeed, sufficiently so to form quite a serviceable yellow filter, for orthochromatic plates. What has been said in this connection may be taken as applicable to all color-processes, especially to the Autochrome, and Paget, and perhaps in a slightly lesser degree to the making of color-sensation negatives, for three-color work. Lenses should never be stopped down below F/16.

We have heard little of color-photography with a telephoto lens, and I must confess to having little experience with it, but in the classes of work for which it is designed I can imagine no more valuable tool than one of the large-aperture telephoto lenses with a relatively short back focus such as the Telecentric or Adon. The older telephoto lenses are not so well suited for color-work, by reason of the fact that they work at a small aperture; and their definition, upon which much of the success of the picture depends, is very poor.

The soft-focus lens, owing to the reason that its particular feature is obtained by partial color-correction, is hardly a suitable tool for color-photography, but it is to be hoped that with the advance of the latter a lens of this type may be devised to give us some of the pictorial advantages that it now offers for monotone work.

Of course, only filters suited to the process, as issued by its manufacturer, should be employed. I have found that sometimes these vary in color, but this will not affect their work, as they are carefully tested before sending out. Preferably, they should be mounted in optically flat glass, and every care taken of them. Experience teaches me that the best place for the filter is between the components of the lens, or if fitted in a cell, slipped over the back combination. There is a reason for this latter course. If the lens has not been perfectly color-corrected, the filter may prevent any ill-effects from this, but if it were fitted to the front of the lens, such would not be possible. It is most important that no light is allowed to reach the plate, except through the filter, such as would happen if the latter fitted loosely, and this is one objection to the plan of using a thin circle of gelatine between the components of the lens, as it is almost impossible to obtain a perfect fit, and white, or other light reaching the plate other than through the filter causes the color-photograph to be of a blue, or violet tint. When using unmounted gelatine filters, I make a practice of cementing each between two circular pieces of thin black cardboard, with the centers removed, leaving about an eighth of an inch all round to act as a cell,

the outer circumference of the cell fitting quite tightly into the lens mount. This also saves spoiling the filter through handling the gelatine-surface with hot or damp fingers, which is frequently done. For the Autochrome process a special screen-holder is supplied to fit on the inside of the camera, which should always be used when the camera will permit. With the view-camera there is always room on the inside of the front for this, but the compact folding pocket-camera does not always permit of this procedure. The solution of the difficulty lies in having the filter mounted in a well-fitting cell, to slip over the back combination of the lens.

An exposure-meter is of great importance if waste is to be avoided and the production of perfect results is to be the rule, and not the exception. I recommend a meter that makes an actual light-test, in preference to one of the published tables, or calculating-devices working upon a system of scales to be mentally adjusted by the photographer. Special colorplate-meters may be obtained, but there is really no need of these, though the Watkins Company supplies an interchangeable color-dial for their Bec meter. This is a great help, and simplifies matters considerably.

Of our old friend, much abused and ill-esteemed, that most of us still cling to—the darkroom lamp, though it may be fitted with a “safe light,”—I would point out that no light is “safe” for colorplates, and the lamp should be simply used as a means of seeing what is wanted in the room, and in aiding the photographer’s sense of touch, and not for the purpose of peering at the developing-plate in its early stages. I use several thicknesses of the safe-light paper issued by the makers of the particular plates that I happen to be working, cemented between two pieces of plain glass with a solution of Canada balsam, and bound up with lantern-slide-binding-strips. This fits into the darkroom lamp in place of the usual screen. It is to be noted that for powerful illuminants a greater number of sheets must be used than may with safety be employed with a candle.—*The British Journal*.





TWINS

WILSON TODD

Photographing Children

WILSON TODD

HAVE you ever gone out to make home-portraits and found that the subject was a fidgety little child that just wouldn't hold still long enough for you to make a normally exposed plate—and, then, to make matters worse, the conditions of light were poor and probably you had dark walls with which to contend? Did you feel like giving it up or perhaps postponing the appointment until you could come prepared with an artificial light of some kind?

In many cases, this might mean a loss of business to the professional photographer; as for the advanced amateur—well, he is not willing to be defeated so easily, either; so let us decide to overcome whatever obstacles we can and to make the best possible pictures in the circumstances. And this is the way we go about it. First, we must use a fast plate or film. Then we must get the most out of our light—let us say

that we are using an ordinary window. We remove any curtains or shades that interfere, and see to it that we do not block up the window in this case, for we need every bit of light that we can get. We place the subject where the light is strongest, and are careful to light up the whole face, at the same time guarding against heavy shadows. We are also careful to illuminate the hair and outline of the figure to give it proper relief. With the reflector we flatten out the lighting, somewhat, which at first seems contrary to all rules; but you will soon see that there is method in this procedure.

Now we proceed to focus—this is an important point. We are going to use the lens wide open—let us assume that we are using a high-grade lens, one that works at $F/4.5$. We focus only on the important points and let the less important things go. That is, we will not be so particular about drapery, general surroundings and background. We always focus on three points, the face—prin-



"HERE COMES DADDY!"

WILSON TODD

pecially the eyes—the shoulders and the hands, or in the case of a full-length of a child, we must be sure to get the little legs and feet in sharp focus for they are among the most important features in a child's portrait. Objects that do not mean anything to the picture we must throw into shadow or, better still, eliminate them, if possible.

Now we are ready to make the exposures. As working media we have a fast plate, a rather flat lighting and the sharpest possible focus with a wide-open diaphragm. We agree that it is absolutely necessary to make snapshots so that we proceed to make the exposures with the shortest squeeze that we can give the bulb. So much for the exposures. We pack our equipment and depart.

We know that our plates are somewhat underexposed; but they have a flat, even lighting so

that we can develop for contrast. We also realize that we cannot carry development as far as we could had the exposures been normal, so that we stop when there is sufficient detail in the shadows. After washing and fixing the negatives we examine them and are amazed to note how our flat lighting has rounded out the subject; but the negatives are rather thin so that we intensify them to the proper density.

As a result of the method of procedure that we have just followed, we have a negative that will make an attractive set of proofs, for we have eliminated virtually all motion and yet obtained negatives of good printing quality. We have caught the attractive child-expressions that come and go, the smiles that are only a moment long, and the natural poses that a child assumes unconsciously, which, ever-changing, are impossible to record with a prolonged exposure.



FIGURE 1

A Photographic Gambol

L. B. FLINT



UNDER the above title, three photographs are herewith submitted, two of them illustrative of the antics and surprises which invariably garnish the endeavors of the photographic neophyte and are not to be accepted as evidence of any preconceived effort or knowledge to which the writer may lay claim.

Having recently acquired a small camera, Ica Cupido, equipped with Zeiss Tessar Ic, F. = 120 mm., it seems but natural that the next step in the line of progress, was to ascertain if the thing would really do what the man who sold it averred—to wit, make a picture. Accordingly, on the following morning, favored with the brightest of sunshine, haste was made to put the apparatus to the test, without regard to artistic value of the theme selected, which happened to be a large silver spruce-tree of unusual beauty

and symmetry, close to the driveway that led to the garage. The equipment referred to also included a Zeiss Ducar Filter C/12.

As the subject selected offered a considerable range in the gradations in the greens, it was decided to make two exposures, one with and the other without the Ducar filter; in each case employing double-coated orthochromatic plates.

After developing and fixing, the first surprise came, when, after the plates had been allowed to soak in the washing-sink for about an hour, it was found that the upper film of one of them had separated from the lower one and was curled up in another corner by itself.

Further investigation disclosed a faint image remaining on the lower film which still adhered to the plate. Efforts to develop this image by intensification and sepia-toning were unavailing.

On examination, the top film was found to be

in good condition, whereupon an old plate, size $12 = 16.5$ cm., was stripped, the film carefully floated upon it and allowed to dry horizontally.

When dry, it had firmly attached itself to the plate, but altered its dimensions—having stretched from $6.5 = 9$ cm. to $8.2 = 11.4$ cm., without any appreciable evidence of distortion, from 58.5 to 93.48 cm. Thus we have at hand a method of enlarging not advocated in books.

In attempting to explain the conditions which

instead of at ten multiple and an *underexposed* forced print, tell the whole story.

Picture No. 3 is a normally exposed and normally developed print, made from the same plate as the "Summer-Blizzard." From the foregoing, it appears to be quite feasible to produce passably good winter-scenes in summer, without the annoyance of having one's fingers and toes frost-nipped during the operation.

In conclusion, the following data may be of in-



FIGURE 2



FIGURE 3

caused the upper film to separate from the lower one, the writer suggests that the action may have been due to the fact that the temperatures of the darkroom, developer and fixing-bath were abnormally high and that the fixing-bath contained no chrome alum. Yet, in the case of the other plate—which was developed at the same time and under the same conditions—the film remained intact, even the usual frilling under such conditions not being manifest. Our narrative thus far refers to the plate, designated as No. 1, exposed without the Ducar filter.

Attention is now invited to the other, No. 2, to which we may, for lack of a better name, give the title, "A Summer-Blizzard." Overcorrection resulting from the use of a Ducar filter combined with orthochromatic plates, *overexposure*, from an error in calculating the filter at twenty

terest: Camera: Ica Cupido, $6.5 + 9$ cm.; lens: Zeiss Tessar, Ic, $1 : 4.5$, $F = 120$ cm.; filter: Zeiss Ducar, C/12; plate: Hammer Orthochromatic Double-Coated; exposure: September 14, 1919, 11 A.M., bright sunlight, determined with Heyde Actino-photometer = 13, No. 1, without filter, at $F, 12, 1/10$ second, No. 2, with Ducar filter, $F, 12, 2$ seconds; developer: Pyro (Eastman tube), temperature 72° F.; fixing-bath: Acid Hypo, temperature, 72° F.; paper: Cyko Studio Contrast, No. 6; exposure: 4-60 Watt Mazda lamps at 10 inches, No. 1, 15 seconds, No. 2, $5\frac{1}{2}$ seconds, No. 3, 45 seconds; developer: Cyko H-M tube, with 6 oz. water, temperature, 65° F.; development: No. 1, 50 seconds, No. 2, 2 minutes (forced), No. 3, 45 seconds; fixing-bath: Cramer's excellent Meta-Chrome-Hypo, temperature, 65° F.

At-Home Lantern-Screens



MUCH of the success of lantern-projection depends upon the screen. It is often called the "sheet," and in makeshift shows it often is actually a sheet, of which the proper use is the domestic one. A bed-sheet, be it remarked, is a most unsuitable screen for projection, for several reasons. For instance, there is the difficulty of getting it flat without injury, and there is the loss of light which its lack of capacity entails.

To obtain a bright picture, it is necessary either to have a very powerful light, which will allow us to be wasteful of illumination in other directions: or else, as is more often the case, to use the best light one can, which may not leave any margin, and to take care that the most is made of it. This means that the screen must be as opaque and as reflective, in a diffused sense, as it can be got. It is only necessary to look behind an ordinary sheet when a lantern-picture is being thrown upon it, to see how much of the light is coming through: and all that is clear waste. It will often be found that the picture seems nearly as bright at the back as at the front, showing that about half the light is getting through. There must inevitably be some loss: for the most perfect screen will not reflect all the light it receives, but it certainly ought to be kept to a minimum.

The surface given by good whitewash or white distemper is one of the best, and if there is a smoothly plastered patch of wall which can be treated in that way, we have a permanent screen of the most efficient sort. Failing that, a sheet may be stretched on a frame and covered smoothly with white paper. Stout cartridge-paper is best, and can be bought of a considerable width of a dealer in artists' materials.

The method which is generally advised is to use the white paper as the surface on which to project, either as it is, or after giving it a coat of distemper; but our own preference is to use the paper as a backing, applying the distemper to the fabric, and projecting the image upon that. If the fabric is stretched on a frame, the paper liberally pasted and left till limp, applied to the fabric and smoothed down, and the distemper then applied to the other side of the fabric, there will be no trouble from the moisture of the distemper affecting the pasting of the paper, and when the screen is dry it will be quite dead smooth and opaque.

Glossiness in a screen is a mistake. It gives specular and not diffused reflection. For very

small pictures, paper or card screens can be used, and it will then be found that the matte surface of thick, white blotting-paper gives a much better picture than the glazed surface of card. For the projection of slides in color (not colored slides) a small picture should always be arranged, so as to give brilliance to the colors, and the blotting-paper surface is good for these.

The demand for very highly reflecting surfaces for projections in color, cinematography, etc., has led to the introduction of screens having a metallic preparation on their face. These may be necessary in certain cases, but they hardly concern the home-lanternist.

A screen that is permanently stretched on a frame, if it is of any size, is cumbersome, and in the way when not in use. One that can be rolled up offers distinct advantage in this respect, as well as being more easily kept clean. On the other hand, rolled-up screens, except when quite new, invariably curl at the edges, and it is unwise to project upon them a picture which is so wide as to approach within six or eight inches of either vertical edge. A good way to deal with this, is to arrange the screen so that a pair of dark curtains can be hung up, one on each side, completely covering the edges so far as they are not flat with the rest of the screen.

Mere size in a lantern-picture is always to be deprecated as an object: and the dimensions of the projected image should never be determined by the capacity of the outfit, except as far as this imposes a limit, but by the average distance of the spectators from the screen. In an ordinary room at home, an eight- or ten-foot picture is offensively large. One cannot get far enough from it to see the picture properly as a whole, and much of the image will seem coarse and empty. For the same reason, it is well to keep the seats well away from the screen.

The width of screen necessary in any case is easily found by a simple calculation. The distance of the lantern from the screen in feet, multiplied by three, and divided by the focus of the lens in inches, gives the width of the picture in feet. Put another way, we may say that to give a picture of any definite width, we multiply that width in feet by the focus of the lantern-lens in inches, and divide by three, to get the distance of the lantern in feet. Or, we multiply the distance of the lantern in feet by three and divide it by the width of the picture in feet, to obtain the focus of the lantern-lens, which is necessary in any particular case.

LANERNIST, in *The Amateur Photographer*.



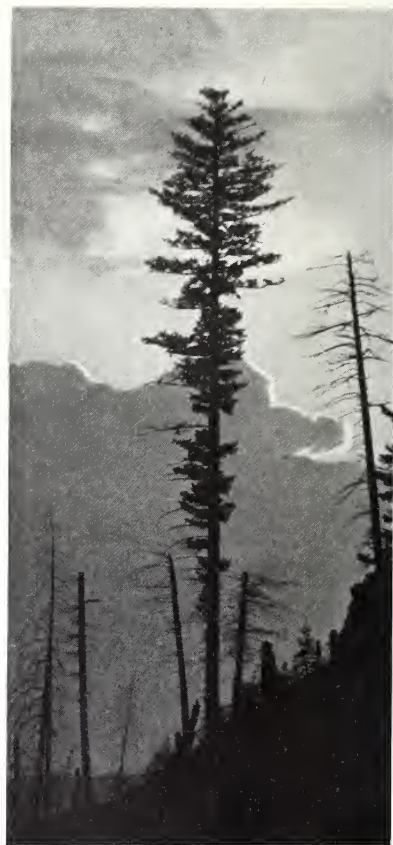
GOOD FRIENDS
ALFRED W. CUTTING

TO A LONE FIR

ALEXANDER DAWES DU BOIS

O stately, stalwart, wind-tried tree—
Canst thou find tongue to answer me—
How keep'st thy shaft so arrow straight,
Undaunted by the gale, or weight
Of winter-snows? O fir sublime,
What guides thee in thy heavenward climb?

Lone sentinel of the fire-swept slope,
Hast thou the gift of love, or hope,
That thus doth point thee toward the sky,
Whilst all thy lowly brothers die?
Behold their plight about thy feet!
Did they not strive against the heat?



Scarred chieftain of the storm-lashed hills,
Proud bearer of thine untold ills,
How fearlessly thy silent form
Stands, heedless of the darkening storm!
Hast thou the dauntlessness to hold
That every cloud is lined with gold?



EDITORIAL



Schools of Photography

A COMMENDABLE feature of the reconstruction-work is the activity shown by the Federal Board of Vocational Education in preparing disabled ex-service men to earn their living. Men who have served their country, in any branch of the service, and have been honorably discharged, but who are either physically unable to resume their former vocations, or unable to find employment, at all, may receive free vocational training that should fit them for a profession of a lucrative and congenial character. Thus, men who have a predilection for photography, with a fair degree of experience, may receive a course of preparation or training in the practice of that profession. To this end, they are sent to schools of photography where, at the Government's expense, they may receive practical instruction which will enable them to go out into the world and earn a comfortable living. Of course, it is evident that the amount of success won by the erstwhile Government protégé must depend upon the ability and zeal he brings to his task. If his training has been practical, sound, and of the kind to meet modern requirements, and if, in addition, he is physically fit and personally acceptable, he should have no difficulty to obtain employment in a professional portrait-studio, a photo-engraving establishment or a publishing-house, where his services will be welcome according to the work in which he excels; although, it may happen that he must accept whatever opening is available, and await an opportunity to better himself. The main thing after all, is an opportunity to prepare himself, in the shortest possible time, to become a first-class worker in whatever branch of photography he may decide to engage, and which will enable him to make a living. Fortunately, there are several institutions in the United States that prepare and train students for a professional career, and which have proved their worth by years of successful activity. Being situated—three in New York and one in Illinois—east of the Mississippi River, these photographic schools meet eminently the convenience of the eastern population of this extensive country. The West, as far as the Pacific Coast, is provided with universities and other institutions of learning; but

an institute devoted exclusively to practical instruction in photography, in all its branches, it cannot claim. To be sure, almost every American university and technical institute supplies a course in photographic science; but practice with ordinary apparatus for indoor or outdoor requirements is not included. That is to say, a student may acquire a sound knowledge of the optics and chemistry of photography; yet he might not learn how to photograph successfully machinery, a home, accident or social affair.

The need of first-class schools of photographic instruction, particularly in the extreme West, seems to be felt by the Federal Board of Vocational Education, which desires to send deserving ex-service men with a photographic bent to such an institute in California, the Middle West and elsewhere—according to the convenience of the men under consideration. The Department naturally feels that it ought not to be restricted to the use of institutions which, though admirable, may not meet geographical exigencies.

Here, then, is an opportunity for the establishment of several thoroughly efficient institutes of photography, in addition to those that already exist. Persons who are interested in such a laudable project, should bear in mind that it demands the exercise of high standards of technical knowledge, executive ability and business-ethics. The institution must be provided with all necessary apparatus and accessories, as well as opportunities for adequate practice. A school of photography that combines these requisites, in an eminent degree, will command universal respect and confidence. At this writing we are informed that a school of photography is to be established at the Naval Air-Station, Anacostia, D.C., and is to be opened in January. The curriculum will include theory, aerial and ground photography, and laboratory-work. In the new personnel-bill, provisions have been made to establish the ratings of Chief Photographer and photographers of the first, second and third class. Upon the completion of the course, they will be assigned wherever photographers are required. Unfortunately for disabled ex-service men, this new school is intended only for men going into active service, the former making the most of existing means of preparation. Here, then, is the need of a special school of photography.



ADVANCED COMPETITION

Closing the last day of every month
Address all prints to PHOTO-ERA, Advanced Competition
367 Boylston Street, Boston, U. S. A.



Prizes

First Prize: Value \$10.00.

Second Prize: Value \$5.00.

Third Prize: Value \$2.50.

Honorable Mention: Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

Prizes may be chosen by the winner, and will be awarded in photographic materials sold by any dealer or manufacturer who advertises in PHOTO-ERA, or in books. If preferred, the winner of a first prize may have a solid silver cup, of artistic design, suitably engraved.



Rules

1. This competition is free and open to photographers of ability and in good standing—amateur or professional.

2. *No more than two subjects may be entered, but they must represent, throughout, the personal, unaided work of competitors. Remember that subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era awards are announced.* Prints on rough or linen-finish surface are not suitable for reproduction, and should be accompanied by smooth prints on P. O. P., or developing-paper having the same gradations and detail. All prints should be mounted on stiff boards.

3. *Unsuccessful prints will be returned only when return-postage at the rate of one cent for each two ounces or fraction is sent with the data.*

4. *Each print entered must bear the maker's name and address, the title of the picture and name and month of competition, and should be accompanied by a letter, SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks will be sent upon request. Be sure to state on the back of every print exactly for what competition it is intended.*

5. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. However, this does not prevent the photographer from disposing of other prints from such negatives after he shall have received official recognition.

6. Competitors are requested not to send prints whose mounts exceed about 11 x 14 inches, unless they are packed with double thicknesses of *stiff* corrugated board, not the flexible kind—or with thin wood-veneer. Large packages may be sent by express.

7. Competitors who have won three first prizes within a twelve-month, become ineligible for two years thereafter. The too frequent capture of the first prize by one and the same competitor tends to discourage other participants and to make the competitions appear one-sided and monotonous.

Awards—Architectural Subjects

Closed October 31, 1919

First Prize: E. M. Pratt.

Second Prize: Nathaniel E. Brooks.

Third Prize: E. Radeker Stancliff.

Honorable Mention: Beatrice B. Bell, Henry Boak, Winn W. Davidson, William S. Davis, Maude Lee Eldridge, Dr. B. Edwin Erikson, George W. French, Thomas W. Graddock, Dr. John Inglis Habben, Olaf M. Johnsen, William D. Kelly, Rev. Leon M. Linden, Irving S. Lovegrove, Emmett L. Miller, Joseph B. Morse, Jr., Licio Carlos F. de Moya, Alexander Murray, Louis R. Murray, George S. Nalle, Charles O'Brien, Jr., Dr. Pardoe, J. Herbert Saunders, Edward H. Smith, Herbert D. Smith, Kenneth D. Smith, James Thomson, C. B. Weed, Leopold Zwarg.

Subjects for Competition—1920

"Twilight-Pictures." Closes January 31.

"Still-Life." Closes February 28.

"Nature-Studies." Closes March 31.

"Rainy-Day Pictures." Closes April 30.

"Miscellaneous." Closes May 31.

"Speed-Pictures." Closes June 30.

"Rural Scenes." Closes July 31.

"Shore-Scenes." Closes August 31.

"Outdoor-Genres." Closes September 30.

"Architectural Subjects." Closes October 31.

"Domestic Pets." Closes November 30.

"Indoor-Genres." Closes December 31.



Photo-Era Prize-Cup

IN deference to the wishes of prize-winners, the Publisher will give them the choice of photographic supplies to the full amount of the First Prize (\$10.00), or a solid silver cup, of artistic and original design, suitably inscribed, as shown in the accompanying illustration.

This prize-cup is one that any camerist may be proud to win, as it is bestowed only on those who merit it by consistent technical and artistic effort.



SUN-FLECKED COLUMNS

E. M. PRATT

Early-Morning Photography

It seems strange that so few photographers, in proportion to the large number of amateurs, everywhere, realize the advantages of early-morning photography. By "early" one means before the mists, and sometimes fog, have cleared away. We have been told about the "early bird" from childhood, but particularly is the maxim true of the early photographer. He stands a far better chance to get pictures than the mid-day man, and he even has advantages over the evening-worker; for towards the close of day the light is not so actinic, and it is more difficult, generally speaking, to determine the correct exposure.

Most of our glorious hot summer-days, when so many are on holiday and their time is their own, are begun with a mist or ground-fog. And this is where the man with his little fixed-focus camera can stand side by side with the worker with a large-aperture focusing-model; for Nature will do for him what his little camera cannot do, if he will only get out in the morning. Why should it be so hard to get up and out if we have our hobby at

heart? Swimming is a hobby to many, and any summer-morning, if we stroll by the sea, river, or lake at six o'clock, we can see many indulging their favorite pastime and getting lots of fun out of it, too.

We are told so often, "It's nice to get up in the morning, but nicer to stay in bed"; and each time the speaker expects us to laugh and agree. But this is only true until we are out. Once we are out, and feel the cool, pure, fresh morning air strike our face and form, and we inhale it, there is that feeling of sweetness and freshness about it all that we wonder how we could let such a precious time—the most precious in all the day—pass by without taking advantage of it.

When one lives by a river, particularly when that river runs through a large and smoky city, the foggy morning is a real godsend. A few years ago, before being the owner of a camera and of pictorial ambitions, the fog-horn was to me a most doleful sound; it always made me think of funerals. But now, when awakened in the night by this screecher, it seems to shout "Pictures! Pictures!" One dozes off again with the full determination to be out early, but on more than



SUNLIGHT AND SHADOW

NATHANIEL E. BROOKS

one occasion on such a morning I have worked around the docks as late as eleven o'clock, and still the far shore of the river, with its ugly factories and chimneys, was hidden by the veil of fog, which gradually lifted as the sun rose still higher.

When ships in the river are photographed under such conditions, there is nothing to indicate that they are not on the open sea. And with this kind of work, at this time of year, the exposures are so short that the fixed-foeus camera is equal to any. Even in making photographs back in the town, the little camera can be put on a support of some sort and a short time-exposure given; and the same pictorial result is obtained, with a distance that *is* distant.

Again, when on holiday, one is out for rest as well as for pleasure, and one does not wish to have to carry a tripod. At such times the camera can often be held on the back of a seat or on railings, low walls, and many other such places. It is also possible to give a bulb exposure—about a quarter of a second—in the hand, by leaning against something—a wall, fence, or tree—grasping the camera tightly against the chest, and holding the breath for just the time that the shutter is

open. The hand-camera worker will find that with a little practice, and by taking advantage in this way of any support that may be available—even of the flimsiest kind—he will be able to give much longer exposures than most would think possible, without any sign of movement being visible in the resulting prints. It is a good plan to make a few trials and find out for oneself just how far this is possible, as it varies with different individuals.

I think there are many to whom our holidays are a problem. They do not like the crowds, dust, and heat of such days, with all the public means of conveyance more than crowded. And yet, when one has so few holidays, one does not like to stay at home. It has been my practice for many years on such occasions to have a light breakfast and to go out early, of course taking my camera, and sometimes the dog. By early I mean any time from four o'clock onwards. I return about 11 A.M. or so, just as the day is getting hot and the streets are getting crowded and dusty, sometimes with many exposed plates or films, and always with a good appetite. Then follows the principal meal of the day and a well-earned rest. In the evening—

THIRD PRIZE
ARCHITECTURAL SUBJECTS



THE COLUMNS

E. RADEKER STANCLIFF

cool of the day there is still time for an outing. A day spent in such fashion is restful, and yet gives one the sense of a day well spent and eminently worthwhile.

To those who have not been in the woods in the early morning, I would say, go for a good stroll while the shadows of the trees are still much longer than the trees themselves; and you will be convinced of the charm and magic of the young day.—R. M. WELLER, in *The Amateur Photographer*.

Storing Sensitive Papers

WITH the advent of dull, damp weather we would impress upon our friends the importance of providing for the proper storage of sensitive papers. Bromide and gaslight papers possess astonishing keeping-properties if certain precautions are observed, declares Rajar, Limited. The careful stock-keeper who uses shelves and cupboards for the storage of sensitive papers should arrange for the papers to be placed on the *lower* shelves as near the floor as possible. It is asking for trouble to place them on a top shelf in a room lit by gas or warmed by a coke stove. The golden rule, to be observed, is to keep all sensitive papers well away from the products of combustion, in a cool, dry place.

Dampness will also cause sensitive papers to deteri-

orate rapidly, and in the case of bromide and gaslight papers, the emulsion may become locally de-sensitized. In some workrooms, a practice is made of exposing bromide prints and delaying development for a day or two; but this is a method which we do not recommend. We made some experiments in this direction, and found that bromide prints exposed one day and developed a few days later, did not give anything like such good results as usual, especially those that had previously been stored in a damp place. The latent image appears to lose a large amount of the depth impressed upon it by light-action. With exposed plates and films this is not so apparent, excepting in damp storage.

The term, "stale paper," is often applied to paper that shows the characteristic discoloration of the edges, whereas the real reason is invariably, bad storage. Sensitized plates and papers should never be stored in a room where sulphide or hypo alum toning is done, or, indeed, anywhere near where sulphide fumes are likely to be present.

A Spirited Interpretation

At the Camera Club Show. "This," explained the photo-pictorialist, "is a study of still life."

"Indeed!" said the visitor. "And where are the moonshiners?"



SUBJECT FOR NEXT COMPETITION ADVANCED WORKERS



FRUIT

JAMES V. DUNHAM

Advanced Competition—Still-Life Closes February 28, 1920

THERE is one distinct advantage to be found in still-life photography—the subject does not become restless, ask foolish questions or otherwise annoy the camerist. However, it is not the motionless character of the subject alone that must be dealt with, but its color and artistic arrangement—in this lies the difficulty. At the outset, it will be well for every contestant to realize fully that successful still-life photography demands skill, invention and study. The very reason that there is usually ample time to make the picture should not lead the camerist into the habit of making several exposures and then, afterwards, selecting the best one for exhibition. The worker should make every effort to have his first exposure include the technical and artistic qualities that he knows are necessary in a good picture.

The technical side of the subject under consideration

should prove to be as attractive as the subject itself. In order to produce true values, it will be necessary to master the use of a suitable plate or film in connection with the proper ray-filter. The advent of the panchromatic plate has enabled the camerist to obtain marvelous results in monochrome. Of course, some subjects will require no special technical treatment; but others will test the camerist's photographic skill to the uttermost. Virtually, every plate-manufacturer and lens-maker issues, free of charge, a booklet on orthochromatic photography and contestants will do well to obtain copies before attempting still-life subjects that include much color. The example given, this month, was made with a panortho plate and a three-time ray-filter. For this very reason, Mr. Dunham has retained the bloom of the grapes and the markings on the apples and pear which could not be recorded on an ordinary plate. The matter of lighting is a study in itself. Some subjects cannot be made by flashlight; others require combined daylight and flashlight or gas and electric-light; and still others daylight only. The

background should receive particular attention as it is imperative that the eye should rest on the subject undisturbed by distortion or incongruous accessories. It should be remembered that the surroundings must harmonize with the thought and subject. No matter how beautiful the idea may be, if an incongruous accessory is introduced, the finished result is disappointing—the spell is broken.

For some unaccountable reason, the mere mention of still-life photography causes the average camerist to visualize a vase filled with flowers or a basket of fruit. The frontispiece, "Roses," by Fannie T. Cassidy in this issue, and our example by Mr. Dunham are exceptions. By that I mean that each worker has taken a hackneyed theme and produced a masterpiece. It does not fall to the lot of most of us to have sufficient skill to be able to do likewise. Hence, my suggestion to contestants is to avoid similar themes and strike out for themselves. It does not seem to occur to many that a pair of overalls, a dinner-pail and a box of tools might be made into a picture of artistic interest. The great trouble seems to be that the average camerist loses himself in a nebular maze of artistic aspirations, instead of staying on earth with the rest of us to portray that which is part of his life and our own. Virtually, the entire success of a still-life picture depends upon its artistic appeal. More often than not, it is the elevation of something humble to the sublime that gives it the strongest interest. We may marvel at the artistic interpretation of this or that fancy of the artist; but the picture that arouses our emotions is the one that is nearest our daily lives.

It should be evident that the hackneyed theme of flowers in a vase or an overturned basket of fruit will not be specially suited to this competition. However, despite the thousands of variations now so well known, there are cases where a camerist has actually hit upon an original treatment of this time-worn subject. If any participant is convinced that he has a flower-picture that is strikingly original, let him send it, by all means. Often, it is fully as creditable to evolve something original out of threadbare material as it is to produce something entirely new. Six persons never see the same object in exactly the same manner. Hence, some enterprising camerist may see a vase filled with flowers in such a new and beautiful light, that we will all be amazed at our own lack of perception.

Still-life subjects are legion. Think of the hundreds of things in your daily home- or business-life. There are infinite possibilities in the selection and portrayal of the tools used by the carpenter, plumber, painter and mason. Among professional men, writers, artists, physicians, musicians and sculptors use the "tools" of their trade just as truly and skillfully as the carpenter or the plumber. The goal to be attained is to arrange these various "tools" so that they "live, move and have their being" in a true, inspiring and beautiful visualized thought.

Perhaps the greatest value of still-life photography to the camerist lies in the responsibility it imposes. By that I mean, that still-life subjects must first be grouped and otherwise arranged before they can be photographed. The logical person to do this is the camerist himself, and by so doing—if he does it well—he is bound to improve his technical and artistic workmanship. That this artistic grouping of inanimate objects is no small undertaking is not apparent until the worker makes the attempt. One of our prize-winning pictures was composed of a pistol, powderhorn, metal lantern and riding-coat. Let us suppose that the reader is given these four articles to arrange in a group so that the composite subject will tell a story, be properly

lighted and attractive artistically. No doubt that many readers of PHOTO-ERA could accomplish this happy result rapidly and successfully; but I am free to confess that most of us would be compelled to devote considerable time to the problem. I can think of no more interesting avocation for the amateur photographer than a study of the infinite possibilities which lie in still-life photography. As for the professional worker he should be better able to know and grasp the opportunities at hand. In one sense, there is less excuse for technical and artistic failure in still-life photography for the reason that there is usually ample time for the camerist to make all necessary preparations before he exposes the plate. Often, a photographer may be excused for some minor technical or artistic fault when he explains the circumstances that made a better picture impossible. But in the case of still-life photography, the element of personal danger, wind, rain, clouds, time of year and other unpropitious factors need not be considered very seriously.

With the aid of a nitrogen-filled electric lamp and one or two diffusing-screens the camerist may test his skill at his own fireside. If electricity is not available a gas-lamp equipped with a Welsbach mantle may be used successfully. In the rare cases where neither electricity nor gas can be utilized, the camerist may resort to flashpowder. I cannot help emphasizing the great technical and artistic opportunities that are open to the intelligent worker in his own home. One or two evenings devoted to still-life photography will prove my point that few branches of photography are more fascinating or of greater benefit educationally. A good book on composition will help the camerist immensely to arrange his subjects to the best advantage. The charm of a still-life picture depends in a great measure upon the pleasing arrangement of the component parts of the subject. Roses are beautiful; but they may be so arranged in a vase that their beauty is overshadowed completely by poor composition and lighting. The camerist will find himself taxed to the utmost to avoid such pitfalls. In short, the attractiveness of any one part of the whole subject will not "put over" a badly composed picture.

The camera-and-lens equipment for still-life photography need not entail great expense. Virtually every box-form and folding roll-film camera may be fitted with a portrait-attachment which permits the worker to place the camera within a short distance of the subject. There are many plate-cameras that are fitted with double- or triple-extension bellows and these are specially adapted to still-life photography. However, it should be clear that such equipments are not required, for witness the data of prize-winning and honorable mention still-life pictures. Again, it is the individual and not the camera that is largely responsible for success or failure. In using portrait-attachments on roll-film cameras it is well to follow the manufacturer's instructions carefully as there is no groundglass to help the camerist compose the picture. Those who use plate-cameras or reflecting-cameras are enabled to work to better advantage, although it does not follow that the final result will surpass the work of the camerist less fortunately equipped. It is for each worker to use whatever outfit he may possess to the best of his ability.

This competition is always a popular one, and we have no doubt but that even a greater number of contestants will strive for a prize this year. The jury is eager to be hard put to select the winners and we hope that readers will respond with a will to make this competition even more interesting and helpful than the one a year ago.

A. H. B.



BEGINNERS' COMPETITION



Closing the last day of every month
Address all prints to PHOTO-ERA, Beginners' Competition
367 Boylston Street, Boston, Mass., U. S. A.

Prizes

First Prize: Value, \$2.50.

Second Prize: Value, \$1.50.

Honorable Mention: Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.



Subject for each contest is "*Miscellaneous*"; but original themes are preferred.

Prizes, chosen by the winner, will be awarded in photographic materials, sold by any dealer or manufacturer who advertises in PHOTO-ERA, or in books.

Rules

1. This competition is open only to beginners of not more than **two** years' practical camera-activity, and whose work submitted here, is **without any practical help from friend or professional expert**. A signed statement to this effect should accompany the data.

2. Workers are eligible so long as they have not won a first prize in this competition. Winners of the first prize automatically drop out permanently, but may enter prints in the Advanced Class at any time.

3. Prints eligible are contact-prints from $2\frac{1}{4} \times 3\frac{3}{4}$ to and including $3\frac{1}{2} \times 5\frac{1}{2}$ inches, and enlargements up to and including 8 x 10 inches.

4. Prints representing **no more than two different subjects**, for any one competition, and printed in any medium except blue-print, may be entered. They should be simply and tastefully mounted. **Subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era awards are announced.** Prints on rough or linen-finish surface paper are not suitable for reproduction, and should be accompanied by smooth prints on P.O.P., or developing-paper having the same gradations and detail.

5. *Unsuccessful prints will be returned only when return-postage at the rate of one cent for each two ounces or fraction is sent with the data. Criticism on request.*

6. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. However, he may dispose of other prints from such negatives after he shall have received official recognition.

7. *Each print entered must bear the maker's name, address, instructions, the title of the picture and the name and month of the competition, and should be accompanied by a letter, SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type, and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks will be sent upon request. Be sure to state on the back of every print for what contest it is intended.*

8. Competitors are requested not to send prints whose mounts exceed about 11 x 14 inches, unless they are packed with double thicknesses of **stiff corrugated board**—not the flexible kind, or with thin wood-veneer. Large packages may be sent by express.

Awards—Beginners' Competition

Closed October 31, 1919

First Prize: Merritt L. Smith.

Second Prize: F. H. Rogers.

Honorable Mention: H. B. Kiefer, Ozank Nunome, C. J. Stallard.

The Beginner and His New Outfit

It has often been a matter of conjecture to me to determine what processes go on in the mind of a beginner as he gazes at his new outfit. It matters little whether he received the new equipment as a Christmas-present, birthday-gift or won it in a raffle. The fact remains that he has a new camera. What will he do with it? If, by chance, a developing and printing outfit is included with the camera, the situation is complicated the more. Of course, he intends to make pictures with the new camera, you say—but will he? There are pictures and *pictures*; likewise, snapshots and *snapshots*; and, furthermore, records and *records*. The editors of PHOTO-ERA have made these terms clear, many times, and the beginner will do well to bear in mind the great difference that exists between them.

Some beginners come naturally by their photographic talents and others have photography thrust upon them. In the present article, I am addressing the beginner who has had photography thrust upon him by well-meaning relatives or friends. In rare cases, the recipient of a camera refuses flatly to use the gift personally and, either gives it away, or sees to it that it disappears. However, in most cases the "lucky man" decides to make the best of it and determines to please his friends—if not himself—by attempting to use the new camera. The first few uncertain photographic steps will determine whether or not the recipient-beginner will make progress and enjoy his new hobby or lose interest and give it up.

Very few of us can become deeply interested in a subject about which we know little or nothing. Hence, the very first step for the beginner is to read—and read again—the instruction-book that accompanies the new camera. Then he should obtain at least one elementary book on photography and read that thoroughly. This done, he is in a better position to re-read his instruction-book and begin to use the camera. Even when he makes his first exposure, he should say to himself, "I don't know much about photography; but I do know that I'll do my best every time that I snap the shutter." A little later, he should begin to study his subject and to reason things out something like this, "Now, there's a pretty bit of road; but I don't think that the telephone-pole is any addition to the picture, nor is the dead tree at the left very attractive. Guess I'll walk along a little farther; perhaps, I'll see something better."

Should a developing-and-printing outfit be included in the beginner's photo-equipment, he should lose no opportunity to find out *why* certain reactions occur in different solutions. In short, the more he knows of photography, the more he will enjoy it and the better pictures he will make.

Let me give a word of caution to every beginner.

FIRST PRIZE
BEGINNERS' COMPETITION



AN OCTOBER-LANDSCAPE

MERRITT L. SMITH

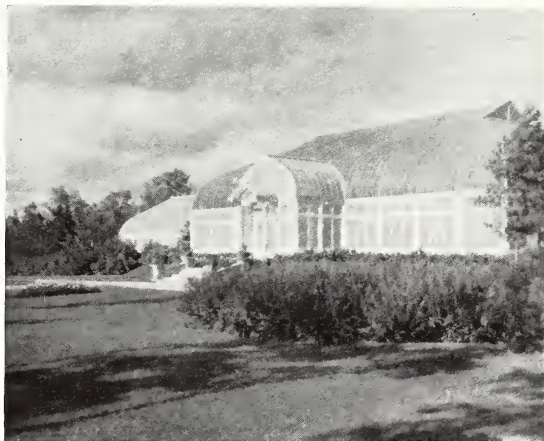
In no circumstances, let relatives or friends discourage his best efforts, unsuccessful though they may be. If a beginner has done his best with the limited knowledge and equipment at his command, he is entitled to as much credit as the advanced worker. It is not fair to compare the initial efforts of a beginner with the finished work of a trained pictorialist. I know of one case in which an expensive camera was presented to one of my friends who had never made a picture in his life. His first results were not the best—neither were they the worst—pictures that I have seen, in the circumstances. Unfortunately, he overheard the following remark by a friend: "Here I gave ten dollars toward the best camera we could get for Mr. T. and he can't do as well with it as I can with my two-dollar one. It was a waste of money, I say!" The result of these remarks was an unpleasant coldness between Mr. T. and his friends, and a decision on his part to consign everything photographic to the heated hereafter. I have no doubt that Mr. T. would have mastered the camera, eventually, and made good pictures with it if his friends had been less unkind in their criticism of his maiden-efforts.

It is the *successful* beginner who enjoys photography, and for this reason those who have made a gift of a camera should see to it that they offer intelligent encouragement, whenever possible. By that I do not

mean that relatives and friends should praise that which is devoid of merit; but whenever there is an opportunity to commend some print or subject they should do so if they would give the full measure of their gift. The recipient will be stimulated to continue and thus make progress. As he learns more about photography and realizes that it is art and science combined, he will—if he possesses the required foresight—grasp the infinite practical and intellectual opportunities at hand. At the outset, the beginner should determine to consider photography something more than a pastime. True, there is abundant pleasure to be found in photography; but it should be the pleasure and satisfaction that comes of accomplishment.

The beginner who has had photography forced upon him and who has decided to make the best of it, and not to offend by apathy or negligence, should merit hearty support. Soon, he will feel that his attempts are leading towards success, and that increased energy will result in his becoming noticed by established workers whose company cannot fail to inspire him with a new interest in photography. A gift of a camera to a man who puts his heart and soul into mastering it, cannot fail to become a source of deep happiness to the recipient and much gratification to the giver.

A. H. B.



THE CONSERVATORY

F. H. RODGERS

SECOND PRIZE—BEGINNERS' COMPETITION

Re-wetting Negatives

To judge from the number of inquiries we get on the applicability of intensification and reduction processes to finished negatives, it is evident that a great many amateurs do not realize how very undesirable it is to re-wet a negative which has once been dried, is the opinion of *The Amateur Photographer*. The negatives about which we are asked are usually described as valuable or irreplaceable; and, if this description is correct, the last thing that should be attempted with them is one of these processes. Even when the intensification or reduction has been carried through properly, there is always the risk of the negative being injured while wet; but a still stronger argument against the practice is that one can seldom be sure that the negative is in a condition to undergo one of these operations successfully. Insufficient fixing or insufficient washing may cause an unsuspected irregularity in its composition, which will show itself in uneven action; and when once this arises, the negative is definitely ruined. Much better is it, if the negative is really valued, to make from it a positive by contact, and from this a fresh negative. Contrasts can be increased or decreased while so doing. Alternatively, an enlargement may be made, worked up, and rephotographed. Such methods have the very great advantage that, if the photographer fails in the first attempt, he can go on repeating the process indefinitely until he succeeds; and yet all the time he has the certainty that, at the worst, he will leave the negative in its original condition. If he must intensify or reduce a valuable negative, at least he should first make as good a positive from it as he can manage, so that, should anything go wrong, he has this to fall back on for producing a fresh negative if the need should arise.

A Novel Use for Stereoscopes

THE stereoscope with its set of stereograms is virtually defunct as a drawing-room entertainer, writes H. Robinson in *The Amateur Photographer*. However, in many homes the little instrument might still be found, pushed away in some drawer or cupboard, if a search were begun.

Most people interested in such things know the manner in which a stereogram is made; but few seem to realize what an extremely charming effect can be obtained by viewing two *ordinary* prints through the lenses, and causing them to superimpose or become as one picture. The mounting of the prints is exactly the same as for an orthodox stereogram. Care only has to be taken that the lower edges of the prints—assuming that they are trimmed to exactly the same point—are on the same straight line, and that the centers—or any chosen point—are $2\frac{1}{2}$ inches apart.

The result obtained is that of a wonderfully brilliant and realistic enlargement of the mounted photograph. The extra brilliance gained when two flat prints are mounted is amazing.

Perhaps one of the most practical methods to apply the scheme is in the case of a hopelessly hard negative, which will not yield anything good on either printing-out or gaslight-paper. To obtain a really good result two careful prints must be made—one upon, say, printing-out, for the harsh highlights; and one on a contrasty gaslight-paper, for the weak details in the shadows. The prints should then be mounted as described, and perfect detail will be seen all over the picture. The difference in color of the prints will not matter a bit, the brown of printing-out prints combining with the black of a developed print to almost give the impression of a two-color photograph.



THE CRUCIBLE

A MONTHLY DIGEST OF PHOTO-TECHNICAL FACTS

Edited by A. H. BEARDSLEY



"HAPPY NEW YEAR!"

A. H. BEARDSLEY

A Call for Practical Articles

THE editor of this department believes that there are many readers of PHOTO-ERA who will be glad to co-operate with him to make The Crucible an eminently helpful department and to widen its scope. To this end, we will offer each month a three-month subscription to any reader who contributes the most practical and helpful article of not more than three hundred words. We are specially desirous to receive items that are new, technical and of scientific value. The present discussion of the reversal of the photographic image is an example of the sort of material that will be welcomed. Contributions, other than the winning article, that possess sufficient merit will be published with full credit to the author. It is not necessary that contributions be of special literary merit, as the editor will edit—when necessary—all material submitted to this department. Although items of technical interest are desired, we do not desire articles that involve highly scientific chemical and technical formulæ or to discuss

subjects in language that is incomprehensible to the average amateur or professional photographer. In short, it is the editor's aim to make this department *unusually* interesting and to avoid "dry-as-dust" articles that would interest only the trained chemist or physicists. The hearty co-operation of every reader of PHOTO-ERA is asked in order that we may make this department of exceptional practical value and interest at the very outset.

Further Discussion of Reversal

INTEREST in the photographic phenomenon known as the reversal of image still continues unabated. The remarkable case reported by Mr. W. Binns in *The British Journal* was mentioned on this page in July, 1919. In the issue of August, 1919, the editor described still another case which was brought to his attention by Mr. James C. Kerwin, a photographic specialist. This latter case aroused so much interest that it was reprinted in *The British Journal* of August

22, 1919. Next, *The Abstract Bulletin*, issued by the Research Laboratory of the Eastman Kodak Company, called attention to the case. Now, we have the following comment from H. L. Larsson, American Colony, Jerusalem, Palestine, which appeared in the October 17, 1919, issue of *The British Journal*. "In your number of August 22 there is an article, 'Reversal of Film-Negative,' which I have read with much interest having had a similar experience to the writer of that article. While on a trip some years ago around the Dead Sea by motor-boat a small Kodak was taken along to make snapshots of the party. Larger plate-cameras were used to make the views. All plates turned out very successfully, but among the films there was an exposure on one of the rolls which has to this day puzzled us. On the east side of the Dead Sea there is a small plain called Ghor et Megraa. Here there is a thermal sulphur-spring, with a pool in which the natives bathe, and in order to protect themselves from the direct rays of a tropical sun, an arbor has been built. While some members of the party were indulging in a bath, an exposure was made, due allowance being made for the dense shade. On the roll five exposures turned out good negatives and the sixth one a splendid positive! The heat of the Jordan Valley, I think, will become proverbial after the prolonged stay there recently of British and Australian troops; and, if it is the radiation of heat in and around the camera which penetrates to the sensitive film and produces overexposure, then anyone who has visited the valley in summertime would declare that the heat there is certainly great enough to turn all films—and why not even all plates?—into positives! Further notes, however, on this subject, I think, will be read by many other photographers beside the undersigned."

We all know that reversal may be produced artificially by overexposure and special chemical manipulation in developing; but what we do not know definitely is the chemical reaction which causes reversal without the knowledge or intention of the photographer. When in the course of the day's work, a photo-finisher places forty plates of the same subject in the same developer for the same length of time and removes them finally to find that five of the plates are positive instead of negative, what is the cause? The editor would like to receive a practical answer to this question—an answer that requires no deep chemical or technical knowledge on the part of the reader. Moreover, the editor of this page will welcome any data with regard to cases of reversal that occur *naturally*—without the special intention of the amateur or professional photographer.

"Photographic" Images by Heat

In the September number of the "Journal of the Chemical Society" appears an article by Messrs. Donald Neil McArthur and Alfred Walter Stewart, giving preliminary notice of experiments of great photographic interest. The results so far obtained are so extraordinary in character that they may turn out to be of far-reaching importance.

An ordinary dryplate is placed, film upward, at the bottom of a light-tight box; two or three glass microscopic slides are placed on the film as a support for a negative, also film-side upward. The box is then closed, and placed near a source of heat, such as a Bunsen burner, a naked gas flame, or an electric heater. After several hours' exposure to heat, in this way, the plate is developed and gives a positive image. No light penetrates the box, and precautions are taken against any possibility of radio-activity.

The time taken to produce the result varies according to the nature of the source of heat, and is also modified by the distance of the plate from this source.

Although the effect produced is exactly similar to that which results from light-action, there is one very striking point of dissimilarity. This is, that the result is in no way affected when the plate is placed between the negative and the source of heat, instead of beyond the negative. This arrangement would almost certainly result in a fogging of the plate, instead of the production of a positive image, if there were any question of direct-acting rays of some kind.

Experiments are to be continued, as the results already obtained are so unusual as to warrant further investigation of phenomena, which may open up new and hitherto unexplored fields.

Iodine-Cyanide Reducer

THE following is an excellent, clean-acting (but intensely poisonous) reducing-solution. When used quite weak, it is excellent for the reduction of bromide prints, as it leaves no stain.

Iodine (10% sol. in potass. iodide sol.)	30 minims	6 c.c.s.
Potass. cyanide (10% sol. in water)	5 "	1 c.c.s.
Water	1 oz.	100 c.c.s.

About 20 grams of potass. iodide in 25 c.c. of water. To 25 c.c. water add 20 grams of potass. iodide; then add 10 grams of iodine which will dissolve. If you add the iodine to 100 c.c. of water, the iodine will not dissolve. Remember that this solution is poisonous.

The Distance of Printing-Frame to Printing-Light

THE length of time it takes to make a print by artificial light depends on the density of the negative, the sensitiveness of the paper, the actinic brilliancy of the light and the strength of the light at the point where the printing-frame is placed.

According to a writer in *Kodakery*, the density of the negative, the sensitiveness of the paper and the actinic brilliancy of any particular light are fixed quantities, but the strength of the light that reaches the printing-frame we can easily change because it depends on the distance the printing-frame is placed from the light.

The closer the frame is to the light the quicker the printing, but if the frame is placed too close to the light the negative will not be uniformly illuminated; some parts will be more strongly lighted than other parts, and, as a result, the print will not be uniformly printed.

The way to obtain a uniform illumination, which will ensure the same strength of light reaching all parts of the negative, is always to place the printing-frame as far, or farther, from the light as the length of the diagonal of the negative.

The diagonals of the various sizes of negatives that are made in modern hand-cameras are:

1½ x 2½	3 inches
2½ x 2½	3½ inches
2½ x 3½	4 inches
2½ x 4½	4½ inches
2½ x 4¾	5 inches
3½ x 4¾	5½ inches
3½ x 5½	6 inches
4 x 5	6½ inches



ANSWERS TO QUERIES



A. G. S.—For finishing prints with a glossy surface, a paper prepared with a natural glossy surface should be employed. The most simple and satisfactory method to work is as follows: The prints, after fixing and washing, should be immersed in a formaline-bath—formaline $\frac{1}{2}$ ounce, water 5 ounces—for two or three minutes, washed for a quarter of an hour and then dried. A glass, celluloid, or ferrotype plate is washed and polished with a soft fabric, first rubbing on with a flannel a solution of 20 grains of beeswax in 1 ounce of turpentine. The print is soaked in water until thoroughly limp, and then a liberal quantity of water is thrown on the polished plate, and the print placed face downwards on the plate, care being taken that there is plenty of water between the two surfaces. The print is next firmly squeezed into contact, interposing a sheet of rubber cloth between the print and the roller squeegee. When quite dry, the print will leave the plate very easily, and its surface will possess a high gloss. This surface is hard and durable, due to the employment of the formaline-bath, but it is well to back the print with a waterproof sheet so as to prevent the mountant from affecting the glaze. This method has proven to be efficient and eminently successful in actual practice.

R. S. P.—There are as you say many conflicting statements regarding the correct time of washing dryplates and films before drying. A considerable amount of investigation in this direction has been conducted by the Research Laboratory of the Eastman Kodak Company with the following results: (1) The rate of elimination of hypo depends very largely on the agitation given to the water, the rate being twice as rapid when the water is rapidly agitated as when stagnant. (2) The rate of elimination is practically independent of the temperature, no difference being observed between measurements made at 65°, 70° and 80° F. (3) The elimination is very rapid under all circumstances, the amount of hypo in the film being halved every two minutes if the film is left stationary, and every one minute if rapid agitation is ensured. Consequently, with complete agitation in an adequate supply of water, the film may be considered to be free of hypo in ten minutes, while if the agitation is less complete, twenty minutes is still sufficient. Opinions to the contrary notwithstanding, hardening with chrome alum, ordinary alum or formaline has very little effect on elimination.

O. L. B.—According to *The British Paper Trade Journal* the stock of the best photographic paper consists of pure rag, which should be free of iron and have an ash content not exceeding four per cent. The breaking-strength of good stock averages 2,400 inches, the strength being about 2.4 per cent. The dilation on moistening should be small, while it is necessary that the paper have a uniform appearance both by transmitted and reflected light. Premature yellowing may be traced to the use of decomposed animal sizing, inferior stock or the action of iron in combination with resinic acid.

J. S. C.—Whether $3\frac{1}{4} \times 5\frac{1}{2}$ or 4×5 is the better size camera is very largely a matter of personal opinion, although the nature of the subjects which it is used to portray and even the character of the coun-

try, if landscape is the aim, have a distinct bearing. The criticism of distortion in postcard-size is unusual and this may be seeming and not actual, due to an excess of foreground in some instances. Certainly a $6\frac{1}{2}$ -inch lens ought not to cause distortion on a $5\frac{1}{2}$ -inch film.

Although 5×7 is very near the ideal proportions most favored by artists, 4×5 has ever been an exceedingly popular size; perhaps the most popular. The shape must suit the subject, however, and the owner of a 4×5 finds himself oftener trimming from the side, and of a postcard-camera from the end. The camera you mention will surely please you if you think it worth the monetary sacrifice to make the change.

You are right in assuming that a 5×7 lens used on a 4×5 plate would constitute a narrow-angle lens for that plate. The advantage lies in more nearly correct perspective, corresponding to what the eyes see without moving in their sockets.

F. C. B.—The spots or streaks on your negative may be due to one of several causes, which perhaps you will recognize as they are alluded to. Such a regular crop of spots of various irregular shapes in rather close formation over a considerable area are often due to stale developer. The stock-solutions may have deteriorated with age, the mixed solution may have stood too long before use, or, as in an instance like this, where the negative in question is the only one of several developed in the same developer, it may have been the last of too large a number to be developed at one time.

If, however, as you state, all of the plates were developed at the same time, presumably in a tank, this regular unevenness or ripple formation resembling crocodile leather is probably due to failure to keep the solution of uniform density and somewhat in motion during development, by shaking the tank, stirring its contents or reversing a liquid-tight tank end for end at frequent intervals. Pyro, pyro-metol and metol-hydroquinone are the developers most likely to give offense in this respect.

Incomplete fixing, the result of taking the plate from the bath too soon, or of a greatly exhausted or very cold bath, may be the cause. If the fault lies in fixing, there will be brown stains eventually.

F. E. C.—Great shutter-speed is not required in snapshot picture-making. Most shutters having speeds of $1/25$, $1/50$ and $1/100$ of a second will answer admirably. It is of advantage, however, to have a shutter that gives speeds of $1\frac{1}{2}$, $1/5$, $1/10$, $1/25$, $1/50$, $1/100$ and $1/200$ of a second, especially in connection with an anastigmat lens. The focal-plane shutter, although very efficient for slow and high-speed exposures, is not essential to ordinary snapshot-photography. Before deciding upon a shutter, it is best to consider carefully the sort of pictures one expects to make and then to purchase a shutter suited to the work in hand. In no circumstances use oil or vaseline in an attempt to make a sticky shutter-valve work easily. A lubricant of any kind will cause the valve to collect dust and become badly gummed-up. The best way is to have the inside and outside of the piston buffed by a reliable camera repair-man. To attempt to do this work oneself may be disastrous.



OUR CONTRIBUTING CRITICS



YOUR CRITICISM IS INVITED

Whoever sends the best criticism (not over 150 words) before the twentieth of the current month, will receive from us a six-month subscription to PHOTO-ERA MAGAZINE.

The winning criticism, in our opinion, is the first one printed below.

CUTTING off three-quarters of an inch from bottom lowers the bridge so the eye can see over it and along the stream. The bridge with proper exposure so as to show detail, should be one of the beauties of the picture instead of as now, simply an obstruction. Touch out the dark reflection of the bridge which, with the bridge, seems to divide the stream so that it appears like two ponds rather than a long stream. Touch out the reflection of the upright of the hand rail and also all of the rail at the left among the trees. Touch out so as to show water the whole length of bridge with pier in center. Lighten foreground a bit.

WILLIAM H. BEACAR.

HAD the photographer eliminated the heavy trees in the foreground at the left he would not have sacrificed any important foreground or background. There

would have been no loss of symmetry or balance to the picture as a whole.

The background is naturally overexposed to give better detail to the shady foreground. By reducing the dense portion of the negative—overexposed background—or the negative as a whole, would have brought out to better effect the aforesaid background without materially affecting detail in the foreground. Depth of focus would thus have been obtained which is always so desirable in all landscape-photography.

WILLIAM C. GILLEY.

VERY beautiful indeed! That was my first thought as I beheld the picture, and wondering what further criticism could be made, I observed that along the top and bottom of the print there was a certain lightness of tone which might have been remedied easily in printing by shading the center of the film. But the maker had shaded all except the center of the negative. Mr. Herriman's problem is apparently to obtain a better print from the same negative. If a new negative is necessary, however, I would advise two or three times the exposure, with development in pyro containing one-



THE PICTURE CRITICIZED THIS MONTH

third less carbonate than usual. A print on N. C. Artura Medium, or by the carbon-process, might give more quality, though it is difficult to judge from the cut—as witness the lack of the wiry sharpness we should expect from a high-class lens used at F/32.

WINN W. DAVIDSON.

This is an exceedingly attractive picture; but a few improvements might be made. The bridge is too near the center of the picture, its weakest point; three-quarter-inch trimmed from the bottom would help that and a little of the foreground could well be spared.

The negative appears to have been underexposed. Under the conditions given as to stop, location-time-plate speed, etc., and calling the light "bright cloudy" owing to the smoke, an exposure of twenty-four seconds would have given more detail in the shadows and a difference in tone between the sky and water, which are now the same tone. The use of a sky-filter and a tripod would have helped a good deal in this case.

GEORGE R. STEVENS.

FRIEND HERRIMAN's print suffers from underexposure, thus making the foreground too dark. From appearance the distance is in sunlight, thus bringing extremes of light to overcome. One way of so doing is to use a ray-filter and a backed plate or film, giving three times normal exposure. Then careful tray-development, stopping same when negatives are apparently only half developed, same being full of detail but just on the verge of contrast. Suitable paper finishes it.

Would suggest trimming just beyond trees to the left and cut off bottom up to a little below edge of water in foreground. Note improvement.

LOUIS R. MURRAY.

EDITOR OF PHOTO-ERA MAGAZINE:

The chilling winds of November seem to have fallen in a veritable blast upon "The Lilies" (November 19) in the form of criticism published in PHOTO-ERA. As many camerists look to "Our Contributing Critics" for guidance, there is a more important question raised by these criticisms than the merits of the picture criticized.

Do our critics insist that a composition must be mechanically perfect, and do they demand that "motive" and "action" shall dominate all our photographic thought? If so, the rim of a water-lily pool would be ideal for staging a marathon and completely annihilate the obnoxious idea of quiet and repose. Why not criticize a sunset for looking out of a picture, or why should we not suspend an acorn from an old oak to demonstrate that it is "propitiously engaged" in shedding its seed? What are lilies for if not to be pulled, or bowls if not to be filled—or partly so, as has been suggested!

Let our critics assist spontaneous originality rather than suppress it by dogmatic rules. Let us by all means avoid the freakish, but seek out the different and the beautiful. The purpose of my letter is to second the criticism of Mr. John Dove, and with him, to congratulate the maker.

HIRAM MYESS.



OUR ILLUSTRATIONS

WILFRED A. FRENCH



For the front-cover—and repeated on page 9—we have for a timely illustration, Rupert Bridge's "In Winter's Grasp." Readers of *PHOTO-ERA*, whose familiarity with the magazine covers the past eight years, may remember other interpretations of winter from this admirable artist in which the outstanding feature is pictorial beauty. This quality is united with beauty of design and beauty of treatment, in the present picture, which appears to be a view among the Hoosic Range of hills—the home of the artist. The eye is carried from the foreground along the rumpled road, up and beyond—towards the hills in the distance; but is arrested by the homestead in the upper right corner. There lies the real center of interest, with its sentiment, the hopes, the contentment, the worries of life, in the country, in the midst of mid-winter surroundings. The picture, incidentally, is a splendid example of uphill-perspective.

As the Editor has had the sincere pleasure to remark, on several previous occasions, the work of Mrs. Cassidy is distinguished by thematic beauty, poetic charm and exemplary composition. Her means are eminently simple and modest and, as stated frequently in our pages, this element will be found in the creative art of the painter, the sculptor and the composer. The artistic eye is impressed, even carried away, by the spacious, peopled canvas; but it will turn gratefully to the simple themes of a Murillo or a Millet. The musical ear is transported by the magnificent and intricate modern symphony or opera; but finds bliss and repose in the simple melodies of Zerlina ("Don Giovanni") or Mignon ("Mignon"). Even the creator of the stupendous *Nibelungenring* gave us the popular and immortal prize-song, from the *Meistersinger*. By examining the works in all the realms of the fine arts, the interested student in pictorial photography will discover that simplicity, naturalness and sincerity in composition and treatment carries the day. Moreover, the fewer the means with scarcely or no accessories, the easier will be the attainment of unity and harmony—so essential to the well-ordered composition. Ladies of taste and discrimination may be enthusiastic over an elaborate gown, but will agree in favor of one that is simple in design and color. It would not astonish the Editor if the present year were to revive the modest costume of the Puritan women—an innovation, the result of the tercentenary of the Landing of the Pilgrims, in 1620. Of course, the foregoing remarks were not needed to demonstrate the exquisite beauty and appeal of Mrs. Cassidy's masterpiece in floral composition. Its shape, too, makes it eminently fitting as a frontispiece of the initial number of *PHOTO-ERA*, 1920. Data: Okdale, Penn.; April, 1.30 P.M.; indoors; sunlight; Graflex 5 x 7; 12-inch P. & S. Semi-Achromatic Doublet; stop, wide open; 40 seconds; Standard Orthicon; tank; Royal Brompton.

Mr. Harrison's pictures are always interesting and attractive as illustrations to accompany his valuable articles on architecture and as records of various types of artistic design they are well worth careful study. Data: "Terrace Lawn"; page 5; morning-light; 3A Graflex; 7-inch Wollensak Vestigimat Series II; stop, F/8; 3x ray-filter; 1/25 second. "Wistaria Gardens"; page 5; same as above except, stop, F/11; 1/20 second.

"Colonial Portico"; page 6; July; V. P. Kodak; Wollensak Vinco; stop, F/16; 1/25 second. "Hamstead Manor"; page 7; February; same as for "Terrace Lawn" except, stop, F/11; 1/50 second. "Residence-Sketch"; page 7; May, noon; hazy; 3A Graflex; 5-inch sterling silver-pinhole; stop, 1/75-inch = F/375; 35 seconds; Eastman N. C. film; tank-powder in tray; Azo medium.

George W. French's appreciation of beauty in nature is again exemplified in *PHOTO-ERA*, the theme being the decline of day, which he has interpreted with much poetic feeling. Page 10. The subject of this artistic portrayal is novel, yet not ostentatious, in design—an ordinary incident observed by his discriminating eye and secured at a propitious moment. The effect of the undulating ripples caused by the moving craft carrying the photographer, and the uneven illumination of the water's surface due to a huge cloud moving westward and obscuring the setting sun, is at once striking and worthy to be pictured by an artist. And George W. French was that artist. The softly curving lines as they recede in gentle perspective, form a pleasing contrast to the straight shore-line in the distance. The masses are well disposed and the tone-values are delightfully true and harmonious. It is a picture that expresses in a most gratifying degree the impression of the approach of evening. Data: Connecticut River; March, 5 P.M.; cloudy; Ansco 2½ x 3½; 4-inch Ansco anastigmat; stop, F/6.3; 1/25 second; Eastman film; pyro; Artura Carbon Black, Grade E; hypo-alum toned; exposure made from stern of New York-Hartford boat.

Although the four illustrations that accompany W. S. Davis' essay perform their mission well, the artist-reader is drawn irresistibly to the gem of the series, "Frost-Magic." Here, this versatile artist is seen at his best. With a full understanding of nature's subtle fancies, the artist has chosen the time—the psychological moment, one might say—when the sun composed a symphony on a winter's frosty day. How often, on some morning, during the winter, the camerist has looked out upon the trees and bushes with every branch and twig encased in transparent, glistening ice, and the sun's bright rays transforming the whole scene into fairy-land. If lucky to have a ready equipment, he would rush out and obtain pictures of the marvelous effect, while another, quite unprepared, would enjoy the view but embittered with disappointment. On other days, after King Frost had performed his miracle during the preceding night, the sun would stay hidden, and the jeweled twigs and branches could not shine and shimmer in prismatic hues. But Mr. Davis was observing and alert. Of course, knowing, as he does, every tree, every bush, every nook and cranny within a radius of several miles of his home, on the north-eastern extremity of Long Island, and also the whims and caprices of nature in all her mysterious moods, our artist has an immeasurable advantage over many of his rival nature-photographers. He may have watched that tree and those bushes for weeks and, when the coveted opportunity arrived, he was promptly on the spot. To have had the sun behind him, or even at his left, would not have enabled him to obtain the wonderfully beautiful result that he did.

The snow-covered shore, the tree with its ice-encrusted branches and the adjacent low bushes, are relieved against the dark waters of Long Island Sound, while a low-toned sky broken by a line of white clouds forms the principal background in the picture. The entire composition is one of rare pictorial beauty and exemplifies a rare day in midwinter. Data: 3 P.M.; bright sunshine; Ilex anastigmat, at F/11; Cramer Icos III ray-filter (listed at 5x strength); Roebuck Double-Coated plate.

"Snow-Bound"; page 14; besides showing a happy arrangement of material, exemplifies the rule to have the sun come from the direction that will yield shadows best suited to the artist's needs. In the present case—as the student will notice—the sun should not have come from the left, as this would have produced shadows falling towards the right and of no use to the artist. Data: February morning, 10.15 A.M.; clear sunshine from one side; hand-camera; Ilex anastigmat; stop, F 8; 1/25 second; Wellington Anti-Screen.

"Winter-Mist"; page 15; made at 10 A.M. in thick fog while light shower was falling; dull light; stop, F/11; Ingento Series A 8x ray-filter; 3/4-second; Roebuck Double-Coated.

"Wayside-Cedars"; page 16; very bright sunshine, 12.30 P.M.; 2 1/4 x 3 1/4 pocket-camera on tripod; rapid rectilinear lens; stop, F/22; Ingento Series A ray-filter; one second; Ansco Speedex film.

It is gratifying to behold a view of the famous Santa Maria della Salute, Venice, other than the familiar one that faces the Grand Canal. I refer to the church as seen from a point south of the Custom House, at the beginning of the Giudecca Canal, as pictured by Florence and Karl Maynard, who visited the Queen of the Adriatic some time before the beginning of the present European war. The view chosen shows the back of the church, with a Seminario Patriarcale and cypress-covered court protected by a high stone-wall. Clustered piers are seen in the center of the view, and a variegated foreground completes the picture, which is unconventional and attractive.

The charming portrait of the popular motion-picture star, May Allison, on page 22, is one that was sent to PHOTO-ERA by the Metro Film Corporation "in the hope that it might win the approval of the critical editor." It certainly did, for he regards it as an exceedingly artistic achievement in pose, lighting, expression and treatment. The picture is entitled, "May Allison ready for the Sandman"—clad in her silken nightdress—and with the bed-time candle inviting her to soft slumber, the dainty Screen Classics, Inc., star is spending a meditative moment before faring into the Land of Nod. "Fair and Warner," the Selwyn and Company stage-success by Avery Hopwood, is Miss Allison's newest picture released by Metro.

A successful picture of a beautiful cat is always admired, particularly, by ladies and children. "Prince," a white Angora, decorates page 23 and, in his spotless white coat, is interested in something outside—unless, indeed, a bird-cage is in his line of vision. The animal evidently faces a strong, direct light; but there is considerable modeling in the head, neck and elsewhere, and, relieved against a jet-black interior, the household-pet may be said to be well-photographed.

The view in front of the home of PHOTO-ERA, 367 Boylston Street and looking west—the tower of the New Old South Church visible in the distance—presents a vista of an orientally picturesque character; but the locality is miles away from a Chinese laundry. The right-hand side of the street consists of office-buildings, the street-floors of which are occupied as

stores. Data: Morning, 11 A.M.; clear; 5 x 7 Century; 12-inch Smith lens; stop, F/8; 1/25 second; Standard Orthonon; pyro; Cyko.

The photography of children in the home is regarded justly as difficult and trying work for the amateur-photographer. How to proceed to obtain successful results, is explained by Wilson Todd with two interesting and attractive pictures on pages 26 and 27.

In "Good Friends," page 31, our old friend and contributor, Alfred W. Cutting, has pictured with charming *naïveté* the attachment that exists between a young girl and her pet—a white-spotted fawn. The grouping and the technical work—particularly as to the young deer—is admirable. Data: 4 x 5 Hawkeye, Stanley plate; made in July; print on Kresko; "the fawn was rescued from two pursuing dogs, by wood-choppers, near my house and given to the child who fed it with a nursing-bottle."

The subject of Mr. Du Bois' poem, "To a Lone Fir," page 32, is a superb piece of photography. Eminently effective is the background with the clouds showing distinctly a silver-lining, although, according to the closing line of the last verse, "Every cloud is lined with gold." Data: Belton, Montana; July, 5 P.M.; storm approaching; Premo 4 x 5; 10-inch Single Achromatic; 8x ray-filter; no record of stop or exposure; Cramer Inst. Iso; pyro in tank; enlargement on Eastman Bromide; photographed against the sun which was entirely obscured by storm-clouds; camera on tripod.

Advanced Workers' Competition

It cannot be recalled that architectural subjects ever formed a theme for a photographic competition, until the present Editor introduced it, seven years ago, as a feature in PHOTO-ERA's monthly competitions. He explained, at the time, that it was not a difficult matter for an artist-photographer to interpret the rigid forms of any class of architecture whether ecclesiastical, feudal, civic or domestic, in a thoroughly artistic manner. Surely, a beautiful church, monument or private residence is capable of being invested with the camera-artist's individuality as any object in the landscape, such as a tree, a cliff or a mountain. Even the humble home of a farmer or a laborer will be found a grateful subject for delightful interpretation, for here, as in the case of a private residence made attractive by nearby trees, a dwelling outside the city, usually offers a setting that appeals to the artist, whether a painter or a photographer. Then, too, it was suggested that a fragment of an edifice could be utilized, and that such a procedure would serve to stimulate the imagination of the beholder and thus heighten the artistic value of the picture. In the several architectural competitions, conducted by PHOTO-ERA during the past seven years, the results have been so gratifying, that this theme has become a regular annual feature of this magazine. Professional painters have viewed with astonishment the beautiful and original creations in this field of artistic endeavor; indeed, they had declared that the photographer could not rise to such a height of artistic interpretation. When they saw the impressive achievements of William S. Davis, J. W. Gillies, Carl H. Kattlemann, E. M. Pratt and Warren R. Laity, they took off their hats, figuratively speaking.

In the present competition, the participants showed a tendency to select examples of the classic style for interpretation, being attracted less to domestic forms. Those workers, however, who tried their skill at country-homes, failed with respect to composition—incongruity in the assembling of parts, poor illumination, or

(Continued on page 52)



ON THE GROUND-GLASS

WILFRED A. FRENCH



Knowing One's Limitations

IT is doubtful whether members of the selection-committee of an international exhibition have the opportunity to see and examine as many photographs as the editor of a popular photographic magazine. The monthly competition of this publication and other means, during the year, yield several thousand pictures of great variety and in many printing-mediums. It is interesting to see the attempts made by some workers to express an originally good negative by a print in gum-bichromate, bromoil, oil or some other printing-process. If the worker is an artist and a skilled technician, he will succeed admirably; but when he is neither, the results are bound to be bad. In the latter case, it is far more advisable to make a plain, straight print or an enlargement from the original negative. For purposes of reproduction, too, a direct print on mat or semi-mat paper is preferable. I hope that this will meet the eye of those workers who are eager to use a difficult printing-process with which they are not sufficiently familiar and thus lose the benefit of a really good negative of an artistic subject.

Terms of Self-Reproach

WHY is it that camerists refer to themselves as "camera-bugs," "camera-fiends," and other undignified and unnecessarily harsh names? "Photo-Fan," as used by Michael Gross, in his humorous poem published in our December issue, does not seem so harsh as it looks to some persons, for it is an abbreviation of "photographic fanatic," and is not altogether illogical. The attempt to be humorous or witty, is doubtless the reason that so many young writers apply to themselves terms that seem to emanate from a class of persons which cannot resist the tendency to express the fast, nervous pace at which present-day Americans are going. Hence, the flippant brevity with which officers of the law, gentlemen, garments and repasts are referred to, viz., "cops," "gents," "pants," "lunches." If camerists, who by the persistent annoyance of defenseless people with their unwelcome advances, merit opprobrious appellations, it is better to let the reproach come from the champions of the victims, or from the victims, themselves.

A Protection to Fur-Dealers

JACOB EINSTEIN, the fur-dealer, lost the sale of a number of valuable coats, last year, because prospective customers returned them with the stereotyped excuse that they didn't suit. The last one returned for that reason caused quite a scene in his store. As usual, the young woman declared that she was sorry that she couldn't keep the sable-coat, because most of her friends did not like it. "That isn't very strange," remarked Einstein's bright salesman, "for the dance-order I found in one of the pockets shows that you must have had enough judges"; whereupon the young woman promptly dropped to the floor in a faint.

This year he hit upon a novel scheme to trap these artful borrowers. He has arranged with a local photographer to make a flashlight-group of the party at which the individual with one of his fur-garments on

trial is present. When the supposed customer returns the coat, with the excuse that it didn't appeal to her people he makes a charge of twenty or thirty dollars for the use of it. If any objection is raised, he produces the photograph and there's no more argument.

Genre

ONE of the most laughable incidents that has come to my attention, of late, is the one related to me by a member of the selection-committee of one of our national exhibitions. Among the entries in the Genre Class was one from a worker whose familiarity with the word "genre" seemed to be somewhat hazy. Not knowing how to spell the pesky word, yet knowing its meaning, the contributor wrote it variously on the back of his three pictures of hunting-scenes as follows: "Jenre," "Jonry," and "Genrie." It would be interesting to know how he, or any one not familiar with correctly spoken French, would have spelled the word, had he heard it pronounced, as it should be, in one syllable—"zhongr."

A Perpetual Novelty

FRANK KING, the well-known photographer of Syracuse, was the subject of several jokes—not at his baby's but at his own expense—two years ago. Mr. King had another addition to his family, last May. On entering King Solomon's Lodge, where he is Senior Warden, he hailed George Warren, the Junior Warden, with a delighted: "Say, Brother Warren, do you know that my..." "I know, Brother King," quickly interrupted the equally delighted Junior Warden, "that's exactly what my baby does!"

Taking No Chances

PARTICIPANTS in PHOTO-ERA competitions are familiar with the data-blanks, supplied by the magazine, and filled out by the participants. The last line, to be filled out, reads, "Is print to be criticized?" In most cases, the word "yes" is inserted; at other times, the space is left blank. Among the pictures received for a recent competition was one of average merit which, according to an added statement of the sender, had been at the — Salon. The data-blank had been carefully filled out; but on the concluding line, "Is the print to be criticized?" the sender had written, "Not on your life!"

A Baconian Theory

"Reading maketh a full man, conference a ready man, and writing an exact man." BACON.

OUR friend Bacon wrote wisely, for he had doubtless in mind the worker in the photographic field. In the first place, he compliments the regular reader of PHOTO-ERA; in the second place, he approves the worker who attends photographers' conventions, and, in the third place, he felicitates the Editor of PHOTO-ERA. May all merit the philosopher's implied praise!



EVENTS OF THE MONTH

Announcements and Reports of Club and Association Meetings, Exhibitions
and Conventions are solicited for publication



George Eastman Still Suspected

It was generally thought that the will of the late Henry C. Frick would remove any doubt that might exist in the minds of some persons with regard to the true identity of "Mr. Smith," the mysterious benefactor, who has given to the Massachusetts Institute of Technology the sum of seven million dollars, and promises to add four million dollars provided that a like amount be raised from other sources before January 1, 1920. Though Mr. Frick left the sum of five million dollars to the Institute, he did not prove to be the mysterious Mr. Smith whose identity has not yet been disclosed by President MacLaurin, although, as stated by the Editor of PHOTO-ERA, in the November issue and reiterated now, George Eastman, of the Eastman Kodak Company, is undoubtedly that blessed and much-envied individual.

President MacLaurin's statement is as follows:

"I am being deluged with questions from newspapers in various parts of the country connecting the name of Mr. Smith with the late Mr. Frick. Formerly I had to decline to answer all questions regarding the identity of Technology's greatest benefactor, but I can now say definitely that Mr. Frick was not Mr. Smith. Happily, Mr. Smith is still living and is watching with interest the progress of the campaign to meet the conditions of his very generous offer.

"It will need the most strenuous efforts to meet those conditions within the few weeks that remain until the first of January—the time limit that Mr. Smith has set. It would be unreasonable to expect continued support from great benefactors such as Mr. Frick and Mr. Smith unless men of lesser means, who see equally clearly the importance to the nation of the highest kind of technical training, take their full share in helping forward the great cause.

"Nor can anyone with any understanding of the needs of the present and any vision of the possibilities of the future have the slightest doubt that all the endowment that may come to Technology from Mr. Frick's benefaction, and as a result of Mr. Smith's offer, will be most urgently needed.

"RICHARD C. MACLAURIN."

The Annual Pittsburgh Salon, 1920

THE Seventh Annual Pittsburgh Salon of Pictorial Photography will be held in the Galleries of the Carnegie Institute, Pittsburgh, Pa., March 3 to 31, 1920, inclusive.

All prints submitted will be passed upon by an impartial and thoroughly competent committee of selection. Prints that possess the highest merits in artistic expression and execution will be hung.

As it has been our rule, heretofore, no picture is eligible that has been exhibited before in the United States.

Entry-blanks, containing full information and conditions of the Salon, may be obtained from Charles K. Archer, Secretary, 1412 Carnegie Building, Pittsburgh, Pa. Last day for receiving prints is Thursday, February 5, 1920.

Allen E. Churchill

It is with deep regret that we record the death of our friend and contributor, Allen E. Churchill. Readers of PHOTO-ERA will recall the many beautiful pictures and helpful articles by Mr. Churchill that have appeared during the past few years. His contributions invariably possessed rare charm and interest. Our sincere sympathy is extended to Mrs. Churchill in her sorrow.

A Typical New Year's Wish

December 29, 1919.

MY DEAR MR. FRENCH:

Here's hoping as '20 draws near,
That your skies be all bright and clear,
That no evil attack you,
No sickness sidetrack you;
Good fortune attend you,
Good Angels defend you;
I wish you a happy New Year!

WILLIAM H. BLACAR.

Elysian Camera Club

AN interesting lecture on the basic principles of the camera, by Mr. Bolwell of the Ansco Company, was enjoyed by the members of the Elysian Camera Club, Hoboken, N.J., on October 31. This was the second of a series of educational lectures and demonstrations during the month. The beginner, as well as the advanced worker, is invited to attend all these lectures and demonstrations, which are free.

Ward Muir's Straight Photography

IN the article by Mr. Ward Muir on "Straight Prints from Straight Negatives," an apple of discord has been thrown into the pictorial photography camp, which should cause a good deal of ink to be shed, for, whether he meant to do so or not, it seems to me that his contention strikes at the very root of photography's claims to be an art at all.

The essence of an artistic presentation is surely that it shall reflect not merely the form or details of some subject in nature, but the mentality of the artist. The definition of art as "nature seen through a temperament" may be hackneyed, but it is surely true. And if it be true, how is that temperament to affect the result in any way if the photographic process is allowed its action unfettered in any degree by the photographer?

Assuming that Mr. Ward Muir uses a tripod camera, he might leave his camera for a few moments, some other photographer find it, and expose a plate. If the intruder's technique equalled Mr. Muir's and all manipulation were forbidden him, he would get a result identical with Mr. Muir's. Where, then, could he express his temperament?

If it is contended that the result he obtained would be an expression of the temperament of Mr. Ward Muir, as he did the selection and arrangement of the subject, it follows that in pictorial photography it does

not matter who does the photographing. It might even be argued that the pictorial photographer need know nothing whatever of photography. Which is absurd?—ARTHUR FINDLAY, *Amateur Photography*.

Professional Photographers Society of N.Y. Metropolitan Section

THE second of a series of informal dinners given by the Metropolitan Section of the Professional Photographers Society of the State of New York, Dudley Hoyt, chairman, took place at the Hotel Astor on the evening of October 25.

The dinner was tendered to Frank Scott Clark, of Detroit. Other guests were Clarence H. White and Lejaren A. Hiller, of New York City.

In his after-dinner speech, Mr. Clark spoke enthusiastically of the larger field in photography and its relations to the graphic arts. Mr. Clark has been the president, for two years, of the Society of Graphic Arts in Detroit.

Mr. White, instructor in photography at Columbia College, and an enthusiastic worker in pictorial photography, spoke of his efforts to link photography with other crafts that use illustrations as a basis of their work.

Mr. Hiller, who has been brilliantly successful in his line of illustrating,—using photography as his means of expression,—gave some practical points along his line of activity. The meeting was one of the most interesting ever held by the society.

A Point Well Made

Hanover, New Hampshire,

October 2, 1919.

MY DEAR MR. FRENCH:—

My silver-cup arrived the other day and I want again to thank you and to tell you how pleased I am with it. As I said in my last letter, it is a thing which one can look back on in later years and still enjoy; but, if photo-supplies were selected, they would soon be gone.

With best wishes to PHOTO-ERA, I remain,

Sincerely yours,

KENNETH D. SMITH.

Waste-Products

THE economical world into which we are hurrying is a world where the utmost use will be made of waste-products, says *The Amateur Photographer*; and, as photography as ordinarily practised is a wasteful process, it seemed natural to suppose that the economist would find here a fruitful field for his energies. But we were unprepared for the range of this phase of the subject as exhibited in a recent German treatise, which has to do with the waste-products of fifty different industries and public services, and claims to be the first book of its kind ever written. In this volume, one of the longest chapters is devoted to photographic waste—the recovery of gold from old toning-baths, the collection, reduction, and purification of the residues in numerous photographic operations in the collodion and silver-printing processes, such as the exhausted silver-bath, the developing and intensifying-solutions, fixing-baths, and the wash-waters of these operations, and of the silver-prints, and the wash-waters also after fixing. The author also points out what concealed silver-mines there are in the solid residues of photography, such as old silver-filters, old enclosures in the plate-boxes, the paper-wrappings on prepared plates (?) and clippings.

Our Illustrations

(Continued from page 49)

multiplicity of objects—or thematic originality. Among the portrayals of buildings in their entirety, none was deemed worthy of official recognition, so that the three leading pictures represented but fragments—façades—and these made a strong appeal to the jury. Is this to be wondered at? Well may the painter look to his laurels, when he comes to view these masterpieces of pictorial photography.

According to the invariable practice of PHOTO-ERA, when the twenty or more prints of prize-winning qualities, in the "Architectural Subjects" competition, were submitted to the jury, the identity of the makers was withheld, and, after the awards had been made, it was discovered that the highest honor had gone to E. M. Pratt, who received this same distinction in the architectural class, October, 1918, for his splendid portrayal of the Capitol of California, at Sacramento, published in January, 1919. That picture represents the stately structure in its entirety and with handsome, low trees only partly concealing certain sections of the building. It has been hung in American and British salons where it has won general admiration. Mr. Pratt's present achievement is again a felicitous combination of the work of man and nature. The importance of cooperating with King Sol is illustrated in highly artistic fashion. The low trees certainly are a valuable feature in this beautiful composition, inasmuch as they serve to soften the rigid lines of the principal subject and increase its basic stability. Just what is the object of the automobile and the group of soldiers, in the foreground, is not apparent. Perhaps, Mr. Pratt can explain. Fortunately—if I may venture to add—this feature is so obscure, that it does not impair the general artistic effect. Data: Name of building not given; March, 1919, 11 A.M.; sunshine; 4 x 5 Sanderson camera; 8-inch Struss Pictorial lens; at F/4.5; Standard Polychrome plate; Azol, in tank; K2 filter; 1/10 second; 8 x 10 print on Eastman Platino C. Bromide; Azol.

Judging from what has been published of Nathaniel E. Brooks' work in PHOTO-ERA, during the past two years, I consider this artist an expert technician. In the competition under consideration, he rises to the height of a masterful artist. In beauty and composition his "Sunlight and Shadow," page 36, seems to fulfil every requirement in pictorial art. Mr. Brooks, also, demonstrates the admirable judgment of joining forces with King Sol, the artist. What a wonderfully beautiful effect he has produced here! But it was the camerist, Mr. Brooks, who responded and made the suggestion his own. The two groups of white globes supply needed and striking accents in this superb theme, and the manner in which the material has been made subservient to the artist's will, deserves the highest praise. In analyzing the technical merits of this rare artistic achievement, the beholder should not overlook the skill with which Mr. Brooks has maintained the truth of linear perspective. Data: June 19, 1919; 2 P.M.; bright sunshine; 3¼ x 4¼ Telescopic Revolving-Back Graflex; fitted with a 16½-cm. Carl Zeiss lens, series Ic, F/4.5; used at F/6.3; K-1 filter; 1/10 second; W. & W. Panchromatic Plate; pyro-soda, in tank; 2½ x 3¼ part of negative enlarged on P. M. C. No. 8 Bromide; M. Q.; print re-developed by bleaching and sulfiding.

The corner of a portico with fluted Doric columns, by E. R. Stanchiff, page 37, belongs to General Grant's Tomb, on Riverside Drive, New York City. It undoubtedly would have been easy for Mr. Stanchiff to

photograph the entire edifice; but, as already stated, a fragment of a structure—as in this case—gives a free reign to the artist's powers of interpretation and stirs the imagination of the beholder who sees the finished print. This, the reader may find to be true with regard to Mr. Standliff's picture. The low-toned details of this section—the south-west corner—of Grant's magnificent mausoleum are singularly true to nature. The glimpse of the Hudson River and the shore of New Jersey are also, and appropriately, in a low key, the only highlight in the picture being a part of the sky, in the center. The general effect is somber and in entire harmony with this noble theme. Data: Bright light; No. 4 Screen-Focus Kodak 4 x 5; 7-inch R. R. lens; stop, U. S. 8; 3-time ray-filter; 1/25 second; Eastman N. C. Film; E. K. special developer; Royal Bromide enlargement.

A feature worthy to be noted by the student, in these three prize-pictures, is the remarkably true linear perspective. This is due to the intelligent use of a lens of adequate focal length. The data, in each case, will explain.

Beginners' Competition

THE charming landscape, which received the leading honor in the October competition, is remarkable in that its author has had no assistance, whatever, in any of the technical processes in producing the print. Furthermore, he stated in his declaration that, up to November 1, 1919, he has had less than one year's experience in practical photography—in fact, until last February was absolutely ignorant of the difference between hypo and metol. This beautiful October landscape seems to lack nothing to improve its composition unless, perhaps, the dark mass of woods, at the right, were to be lightened in tone, so as to make that part of the picture appear less top-heavy. The ever-busy trimming brigade might desecrate an opportunity for activity by suggesting a diminution of the foreground; but I should not be in favor of this, on account of the beauty of this feature and its wise subordination to the subject proper. Data: Locality, Norwich, Vermont; October, 3 p.m.; faint sunlight; 2¼ x 3¼ Folding Brownie; R. R. lens, at F/16; 1/25 second; Ansco Film; Wallace's Metol; Argo Enlarging Smooth Matte, Least Contrast; enlarged with soft-focus lens, at F/11.

"The Conservatory," page 42, has sufficient merit to have won an Honorable Mention in the Advanced Workers' competition of architectural subjects. The picture was made in City Park, Winnipeg, Manitoba, and, apparently, on rising ground, which did not permit a better perspective. At present, the mass of bushes hugs the conservatory; besides, it is too low in tone—doubtless, the result of underexposure. Of course, the general effect is good, when one considers the photographically unfavorable situation of the subject. The position of the sun appears to have been correct, for helpful shadows are falling across the lawn, although, it seems that an equally pleasing result could be obtained with the sun coming from the opposite direction—from the right. Data: June, about 4 p.m.; bright sun; strong wind; 3¼ x 4¼ Speed Graflex; 5-inch Zeiss Tessar, Ic, F/4.5; at full aperture; 8-time color-screen, quick-release exposure; Premo Film-Pack; Premo Dev. Powders; contact-print on Special Royal Velox; Nepera developer; redeveloped.

James V. Dunham's superb still-life—awarded first prize in competition in May, 1919—is presented again, page 38, as an example to inspire participants in the "Still-Life" competition which closes February 28.

For the benefit of the many new subscribers of PHOTO-ERA, the criticism and data are repeated herewith:

The average beholder of the cleverly executed fruit-piece, by James V. Dunham, may wonder that a half-tone reproduction in black should possess a color-suggestion of the objects themselves, whereas the original photographic print was of a warm black tone! The bloom of the grapes is remarkable in its fidelity to nature, the color values in the entire composition being the result of intelligently directed technical skill. The arrangement of the fruits is admirable in its oval design, compact, without elaboration. It may be that it occupies the picture-space with no room to spare; but this oversight is pardonable in view of the accomplishment of an eminently creditable result. Data: Made in Manitoba, Canada, August, 1918; Cycle Graphic, fitted with Kodak Zeiss anastigmat; stop, F/22; 10 minutes; good light; by window; 5 x 7 Panorth Central; 3-time ray-filter; part of negative enlarged on Cyko Enlarging.

"Happy New Year!"

A HAPPY new year to all readers and contributors of PHOTO-ERA!

A number of years ago, the Editor received a set of prints from a correspondent, unknown to him, with the request to criticize them frankly. This, he did. Shortly after the prints, accompanied by frank but friendly criticism, had been returned to the sender, a letter was received from the latter expressing dissatisfaction with the criticism and suggesting, sarcastically, that the Editor do better, if he could, if, indeed, he knew how to use a camera. Instead of answering this insolent and ungrateful correspondent, or publishing his two letters, the Editor appeared as author of a camera-tour in Bavaria, the narrative being printed in the issues of January and February, 1910, together with numerous half-toned photographs, several of which happened to resemble those of the unfortunate correspondent. They were street-scenes; but, whatever their merit, they lacked the obvious faults which marred the prints sent for the expressed purpose of criticism.

Now, this has not been the experience of Editor Beardsley, who has been an expert and versatile photographer for many years, and those who know only the products of his industrious pen, must be convinced that it would be idle to question his technical camera-ability. The picture of one of his family-pets, page 43, has really a personal interest; but it was brought into the editorial sanctum sanctorum during the first week of December, for no special purpose. It then occurred to the Editor to use the picture as a means to carry to our friends and well-wishers the greetings of the new year.

The picture with its possible merits speaks for itself. Data: August, 1919, 3 p.m.; good, bright day; Ansco V. P. No. 2 (2¼ x 3¼ in.); 3½-inch Modico lens, F/7.5; stop, F/8; 1/100 second; Eastman N. C. Film; pyro, in tank; Enlarging Cyko; enlarged from part of negative.

Contributing Critics

THE picture offered this month to our contributing critics for public consideration is "Blackberrying" by Edwin Gore Dunning, a professional photographer of high standing. Mr. Dunning has won several PHOTO-ERA prizes and has also contributed many beautiful pictures. In the present instance, he has consented—with his usual good nature—to have his charming outdoor-genre reproduced for PHOTO-ERA readers.



LONDON LETTER

CARINE AND WILL CADBY



THE sixty-fourth Annual Exhibition of the Royal Photographic Society of Great Britain opened on October 13; but space did not allow it to be noticed in our last letter. It was again held in the Society's Rooms in Russell Square, and admission was free. The usual illustrated catalog was issued at a shilling. We wish that we could hail this show as an improvement on the last, which, as we recorded in these notes, was none too good in the quality of the Pictorial Section. But it seems to us that the curve has taken a further dip downwards, and there is less work of pictorial merit even than last year. It is to be hoped, however, that in time to come, when the Royal holds open exhibitions at a public gallery, it will once more become representative of much that is good in pictorial photography. Quite a number of the exhibits seemed to have been put, not only out of focus, but out of tone, in order to obtain results that certainly had not been achieved, as could be seen by their titles; as, for instance, in "A Woodland Glade," which was so hopelessly black, that it would never suggest anything so sylvan. There were some nudes that were even less successful than such subjects usually are, and that is saying a good deal. The one exhibitor who stood prominently forward as a valuable asset to the show, was Hugo van Wadenoyen, Junior, who sent some strong masterly portraits, one of which was reproduced in the catalog to the lasting credit of the powers that be.

But the Royal does not stand only for pictorial work. There was one room filled with interesting photographs of scenes and people in the South Pacific Islands, made by Mr. Thomas J. McMahon, F.R.G.S., and we incidentally got glimpses of life in what was once a German colony, as in the pictures of German New Guinea. The compiler of the catalog had evidently a grim humor, and was determined that the visitor's interest should be aroused, for under the photographs of Papua, we got a portrait, called "Chief of the Mountains," and the laconic and gruesome information that "He ate his mother-in-law," was added to the title in the catalog; and as we gazed at this dusky gentleman's savage, coarse features, we were compelled to believe it.

Then there was a room devoted to color-transparencies, and we saw the usual variety of color-plates, mostly very good in their way, shown with a light behind them. But, probably, the most important and permanently useful section was that devoted to scientific and technical work; and, although the prints in this group were not so interesting to the ordinary visitor as work shown in the other sections, they had, many of them, a lasting use and value. The illustrations were well reproduced and, from the popular point of view, were chosen with care. Among them, we have the inevitable portrait of Mr. Lloyd George, whose features have become so familiar with the general public through the activities of the press.

A British film-company has been formed with the sole object of making educational films. They are already negotiating with the Board of Agriculture to produce a film that shows the necessity of the campaign against rats. Incidentally, this seems a very necessary step, seeing how much apathy was shown by many districts in assisting in the rat-destruction campaign

that has recently closed. One of the heads of the Natural History Department of the British Museum is already at work writing the "scenario," and the film is to show the damage rats can do, and the manner in which they become disease-carriers. The aims of the company are to produce purely educational films on historical, natural history, and scientific subjects. This is all to the good; but the company's work ought to be supplemented by some action on the part of our educational authorities in adapting the kinema for use in schools, as, unlike the United States, we have at present no arrangement for giving film-lessons to the children. That the film is valuable in education, was shown by the speeding up of the training of air-pilots during the war, when this method was tried.

Commercial film-production is certainly going ahead here. Four companies are planning to erect great studios near London. Work has already begun in converting the disused power-station of the Metropolitan Railway, at Islington, into a studio with all modern improvements. This will be a British company working in co-operation with one of the largest producing firms in the United States, and most of the lighting-equipment has been brought from America. Then, there is the new £1,000,000 Film-Company that has already announced its intention to build a studio close to London, that will have a floor-space of 200 feet by 150 feet, and will contain a large sunken pool for special effects. Another company has obtained an estate on an eminence of 600 feet above sea-level, and yet near London, but, exactly where, we are not told. And yet a fourth has taken the Outlands Lodge Estate at Weybridge, the surroundings of which are ideal for film-production. Not only are new studios being built, but many of the present ones are being extended and altered so that they may be used to their very full capacity.

Converting swords into plough-shares is an old story; but we have its up-to-date example in the news, that the Krupps are to make cameras. A portion of the vast munition-factory is to be devoted to the production of photographic apparatus in connection with the well-known firm of Ernemann, the Dresden camera-makers. It would, indeed, be a satisfactory ending of the story, if in future the Krupps' reputation relied on cameras rather than cannons.

The aftermath of the war is very much with us. The war-memorials have given a great impetus to all kinds of designers; but judging by the exhibition of war-memorials, lately held at Burlington House, no genius seems to have arisen, and there was very little inspiration or originality to be seen. So that, with the exception of the Cenotaph, not many photographs of such subjects have been published. Probably, soon, we shall see some pictures of war-graves in France, as there is a company of officers whose headquarters is at Amiens who have an equipment of motor-cars and photographers (if the latter may be called by that name) so that, at very short notice, they can deliver a photograph of any grave in France or Flanders. Some neighbors have sent to them to-day giving the exact location of a brother's grave, and we hope soon to be able to give our readers some particulars of this interesting photographic development in the war-area.



WITH THE TRADE



Price of Monomet Reduced

THE many users of Monomet developer will be interested to learn that the Ansco Company, sole agent for this product in the United States and Canada, has put into effect under date of December 10, 1919, a revised price-list showing a reduction of approximately 25% in the retail-prices of the developer. The new list-prices are as follows: One pound, \$15.00; one-half pound, \$7.65; one-quarter pound, \$3.90; one ounce, \$1.00. We are sure that the many users of Monomet will be pleased at this substantial reduction.

Newco Flash-Powder

THE flashlight-season is now at its height and a reliable flashpowder is of first importance. We are pleased to call our readers' attention to the Newco Flash-Powder made by the Newco Products Company, 320 Broadway, New York City. Burke & James, Inc., Chicago, and G. Gennert, New York, are the wholesale distributors to the trade.

Ivory White

WE are indebted to C. F. Behrens, 1530 Taft Road, Cincinnati, Ohio, for sending us a very interesting letter written by an expert penman with Ivory White Ink on deep blue paper. The effect was novel and showed to advantage the excellent qualities of this ink for photographic requirements. Ivory White is well suited to titling photographs in albums because it will not rub, peel or powder off, flows smoothly and dries quickly, with a hard, ivory finish. It is ready—nothing to prepare.

City Sale and Exchange, London

IT is with pleasure that we call our readers' attention to the City Sale and Exchange, 90 Fleet Street, London, E. C. 4, England, whose advertisement appears in this issue. After a thorough reading of the latest descriptive matter issued by this well-known English firm, we were amazed at the hundreds of superb equipments listed. Virtually every standard camera, shutter and lens is included. Rarely have we seen a catalog filled with so much accurate, timely photographic information of practical interest to amateur and professional photographers, and, specially, one issued by a dealer in new and used apparatus.

Word from H. M. Bennett

WE were pleased to receive an attractive rotogravure postcard from our friend, H. M. Bennett, dated November 18, 1919, Hamburg, Germany. It will be recalled that Mr. Bennett was directing head of the International Photo-Sales Corporation, New York, which specialized in Ica cameras and Carl Zeiss lenses, before the war. The postcard bore the message, "En route to the home of Ica cameras and Carl Zeiss lenses." From this we infer that soon these goods will again be on the American market.

Sample Copies of Photo-Era

IN the past, we have always been glad to send sample copies of PHOTO-ERA in response to requests. To-day, conditions over which we have no control, have compelled us to discontinue this practice. In compliance with governmental regulations with regard to paper-conservation, we print enough copies of PHOTO-ERA to meet the demands of paid subscribers, photo-dealers, advertisers, news-agencies, and no more.

Requests for sample copies cannot be honored unless they are accompanied by twenty cents in stamps. Perfect copies of PHOTO-ERA will be sent promptly, postpaid, in response to all such requests.

Please Write Your Name Legibly

THE importance of writing one's name clearly, particularly in matters of business, is shown by the fact that several governmental departments require absolutely that the signature to any order, document, requisition or communication be *typewritten*. The necessity of this ruling is obvious.

PHOTO-ERA has among its files, awaiting attention, a number of letters, orders and photographs, many of the latter having been entered in several of our competitions. Unfortunately, the names of the senders are written so hurriedly, or with the intention to preserve a characteristic signature, as to be entirely illegible—except to the signers themselves.

Moral: be reasonable, when certain of your communications remain unanswered; or, to ensure attention, *typewrite your signature!*

Buried Knowledge

IN the course of a year many items of interest to the individual photographer appear in the issues of the photographic press, says *The British Journal*; but in the rush of work they are lost sight of, and when occasion arises to refer to them they are not forthcoming. We do not think that many people preserve—much less bind—photographic periodicals, and the result is that when a difficulty arises there is no course open but to address a query to the editor. This, of course, elicits a reply which is necessarily brief, and although the inquirer may be referred to a full discussion of his problem, the issue containing the article may have run out of print. To obviate this it is an excellent plan to adopt a simple method of filing such articles as the reader may feel interested in. A cheap and easy system is to procure a packet of strong manilla envelopes about 7 by 5 inches. On the outside of each is written a different subject, such as Bromide Printing, Intensifiers, Lens-Matters, and so on, the whole being enclosed in any convenient box. It is now easy to cut out any article or paragraph, and to file it away for future reference. Small paragraphs should be pasted upon a larger piece of paper to avoid loss. Naturally, the file need not be exclusively photographic, but may contain many useful wrinkles and recipes for matters of household-interest appearing in the daily and weekly newspapers. The file is better than a scrapbook as no pasting is required.

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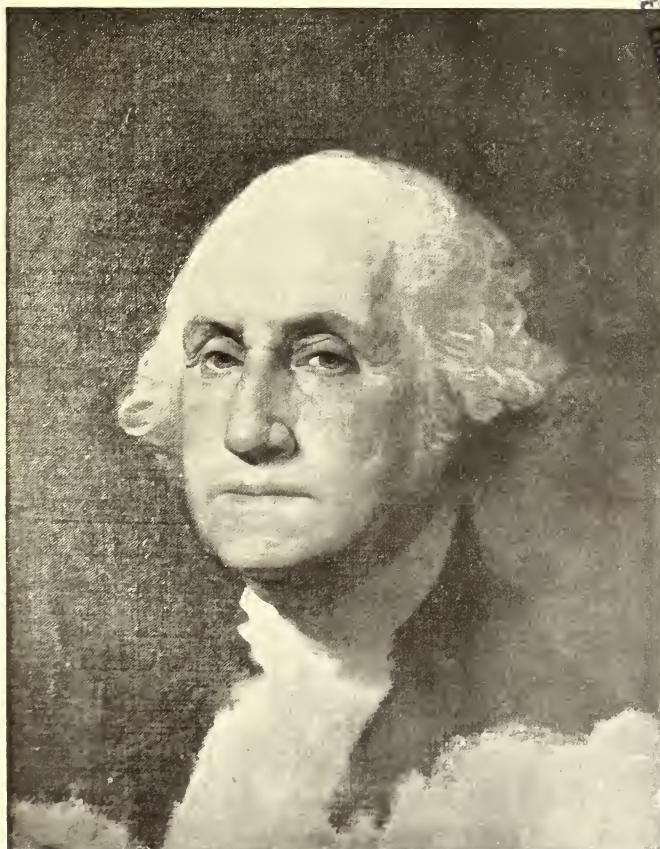
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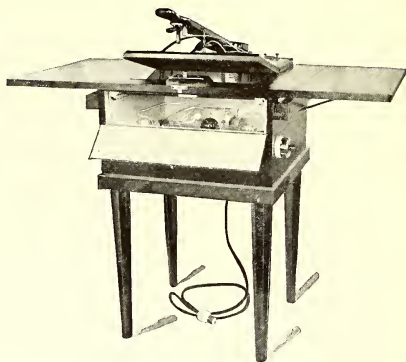
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PHOTO-ERA

The American Journal of Photography



BOSTON, U.S.A.



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No. 2

Individual Vision

H. TRAUT



HO can doubt that every man sees with his own eyes what he looks upon? The impression of an object, both upon the nerves of sight and upon the brain, varies greatly with different persons; in other words, the impression of the object is individual.

With regard to the sensation of color, we know quite positively, and can prove experimentally, that some persons are blind to many and even to all colors. Such color-blindness may be either partial or complete: in the first case the person cannot see certain colors—for instance, the complementary colors like green and red or yellow and blue are exchanged with one another, because with color-blind persons light green and dark red have the same tone. There are also persons who exchange yellow and blue—that is, these colors look alike to them.

Now it is quite certain that color-blind people have quite peculiar, individual notions of the world around them: one needs only recall a cherry-tree with light-gray cherries and light-gray leaves; the blooming face of a little girl with gray cheeks and lips, or blue eyes and blond hair which to the blue-yellow blind both appear to be of the same gray tone.

Even if we photographers, as such, are less interested in this color-blindness, we should not forget that the forms of our surroundings are often indicated not only by their contours, but by their tones and colors, and he who fails to get the impression from the form-indicating contours will not see many forms, at all, or will see them wrongly. It will probably be agreed that persons blind to red-green, will fail to see reddish shadows on greenish surfaces and thus will receive different impressions of form from those of a normal-seeing person.

If we are also in a position to prove positively color-blindness, there is nothing to show that the color-impressions of normally-seeing indi-

viduals are exactly the same—in other words, that the ether-vibrations of a certain frequency or number of light-waves make the same impression on the sight-nerve of every so-called normal eye. Furthermore, if on the foregoing grounds we must in the case of notoriously color-blind persons accept a sort of form-blindness, then the acceptance of the existence of a certain form-blindness based on pathological grounds certainly cannot be unjustified.

Much more extensive, however, must be the form-blindness which results from an insufficient education of the organ of sight as regards the seeing of shapes, just as otherwise normal color-seeing but unpractised eyes find it difficult or impossible to recognize the finer distinctions of color-tones.

Every day, one may observe that many persons will see shapes of an object that other persons absolutely cannot see. So we often make the observation that people, on looking at portraits, discover resemblances to well-known personages, where others are unable to discover the most remote likeness; whereas these same persons, on the other hand, will imagine they see in "speakingly-like" portraits a number of dissimilarities. We can account for this only by saying that such eyes are simply unresponsive of certain shapes, because they do not perceive correctly the characteristic forms of the original or of the reproduction.

Even if we generally accept as the cause of such form-blindness a peculiarity induced by one-sided or defective education of the organs of sight, we cannot disguise the fact that both pathologic and psychologic influences operate to change or modify the individual conception of the forms.

A proof of this is found in the fact that in sickness or trying circumstances an object or face may look quite different to us and we get a different impression of it from what we would



DREAR DECEMBER

G. H. SEELIG

if we were in good health or in a more cheerful state of mind. That the eyes of love are blind to the frequently very marked faults of its object is not only a common impression, but a positive fact, just as hypochondriacs and hysterical persons see many things differently from healthy people.

Individual vision follows the footsteps of individual judgment. The conception of a portrait is the result of these two actions. So it is explainable when an artist's conceptions of the most manifold character frequently show similarity to one another in one or more directions.

One might venture a desire to see an error in this in all circumstances; but it is really not impossible that the characteristic is more or less influenced by the surroundings at the moment. Persons of a serious disposition who, after remaining for some time in the presence of a happy

face without partaking of some of that happiness, must be hard to find. Therefore, we must suppose that the personal traits of the artist are to a certain degree imparted to his subject. Thus, the judging of the characteristics of the sitter would be rendered more difficult by his adaptability to his surroundings.

Unfortunately, the education of our generation, from childhood up, aims at the obliteration of individuality. The children must think and feel, smell and see like their parents, and the pupils like their teacher. Individual thinkers revolt against the lack of adaptability of our educational system, but very few have the force and faith in themselves to come out of the struggle victorious. Then come the everyday people who see everything alike. In them, individuality of vision can be recognized only feebly. And such people call the inward convictions of



PENSIVE

G. H. NAJARIAN

their neighbor "wrong," not because it is their own individual opinion (of which all but a niggardly remnant has been lost), but because they have "learned" to consider it so.

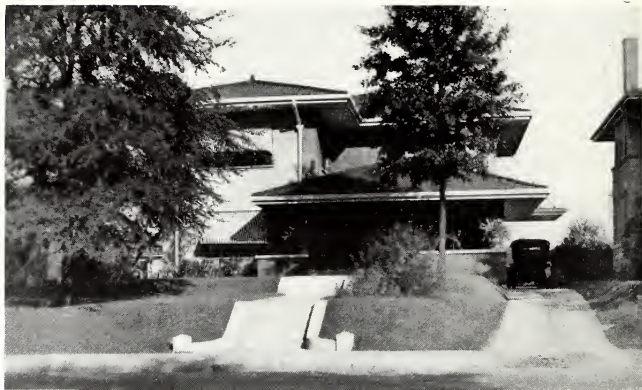
The eye must be taught to learn how to see. This education, however, must not be carried so far that the individuality of the person be lost. In that case, he will fall into the pattern habit, and that is what photography suffers from most, to-day.

If the artist, as generally happens, allows his eye to learn the workings of pictorial art, to a certain degree this is not objectionable, provided that he always accepts Nature as his highest teacher. Therefore, it is interesting and educative to watch and study how two or more artists will interpret the same object, the same person or the same thought.

With regard to landscapes, it is remarkable how one will take in the entire panorama, whereas another will take in only a small section of it, because this for him contains the most striking features of the view. But Nature does not

always arrange her details in such a way as to produce the most artistic effect. The artistic eye, perhaps, discovers the scattered points of interest and rearranges them in a limited space, thus producing a satisfying result.

And it is only there that the task falls to the artist of himself shaping the lines of a portrait. One looks upon all youths and men as stage-heroes—he sees them wrongly thus! The other makes all men intelligent, thoughtful meditators! That is the outcome of a one-sided, individual view. The searching into the individual character of men, the effort to understand that character and to stamp it upon his subject without force—that indicates the artist. The attempt to imitate portraits that he has seen, has nothing in common with the reproduction of the individual view, and leads only to pattern-like work. It is not easy to force good work into the mind, or for the mind to comprehend good pictures; but comparison with nature is the only means which enables one to lay aside and avoid patterns—by seeing and composing individually.



UTILITY AND COMFORT

EDWARD LEE HARRISON

Architectural Traditions for the Photographer

Modern Residence Architecture

EDWARD LEE HARRISON

THE above classification is very broad, and, as a matter of course can be covered only in a brief and general way. One point may be emphasized at the beginning: the present-day designers of domestic architecture in the United States are producing work that is the equal, and in most cases the superior, of any other in the world; and a national residence-style is being evolved slowly, which will be second to none that has gone before.

Possibly, the most striking feature of our present-day residence-architecture is its matter-of-fact practicability. Frankness is a thoroughly American characteristic, and it is evident to a healthful degree in the design of our homes. The old-world tendency—to make a stable or a kitchen resemble the left wing of a royal palace—has been supplanted by a practical system of treating the various units in a simple, substantial way—without display, yet without neglect.

The work of such men as Frank Lloyd Wright and Wilson Eyre will endure, for it is clean, sound and beautiful. And it is intensely prac-

tical. These designers do not work after the fashion of their cotemporaries in the ateliers of Paris. Their drawings are rougher, and less attention is paid to such items as "centralized axis of plan" and "entourage of façade"—but, when the buildings are placed in the midst of their appointed surroundings, they "tie in" with the contour of the grounds and the color-scheme, and look as if they belonged there.

And this is exactly what the modern photographer—employed by owner or architect—must visualize. His pictures must catch this point both exactly and suggestively. The buildings must be portrayed in a natural way. Forced effects—unnatural perspective and elaborate retouching—destroy the simplicity of the design and are not desirable. What is desired, and valued by architect, owner and builder, equally is a straightforward photograph, made with first-class apparatus, balanced with judgment and composed with skill. This picture must be finished in an absolutely faultless manner. Only the best of materials is worthy a place in the workshop of the modern artist.



RESIDENCE BOULEVARD
GREEN GABLES
EDWARD LEE HARRISON

It is worth while to remember, in this regard, that the photographer of to-day must compete—like any other business-man—with up-to-date concerns. The day of the itinerant and shiftless photographer is past. The successful camerist must keep abreast of the times. He must subscribe to the best journals, not only of photography; but of architecture, fashion, the home and garden. An occasional motion-picture journal is beneficial also. His calling must be treated as a serious profession.

he said that the first time he saw it used, was when visiting a little attic-studio, occupied by a penniless artist who made a living by painting numberless little oil-paintings and selling them at a very low price. And the feature of the little pictures, which set them out as unique in the experience of this artist, was that they were not stereotyped copies one of another, as might be expected when turned out in such numbers; but each one had its own atmosphere, its own individuality. And the penniless artist was



ENGLISH DESIGN

EDWARD LEE HARRISON

And now follows the crucial test of the really great and successful photographer. With all the mechanics of his profession in hand, he must preserve his imagination fresh and unwearied; for by its spontaneity is the success or failure of his work to be measured. To sit in a shaded dell, with no cares or trials of body or mind, and dream out a successful composition is a congenial task. But to get out in the August sun, and carry a seven-pound camera around a fifty-acre suburban residence-lot while endeavoring to obtain a few pictures typifying the restful atmosphere of the place, may not be conducive to beauty of vision. Nevertheless the penalty of commonplace work is failure.

One day last summer, a very successful commercial photographer visited our city and gave a talk for the benefit of the commercial studios. And, although what he said was worth while, and most of it was new, one thing stands out prominently above all the professional secrets that he divulged. It relates directly to this matter of "going stale" in imaginative qualities.

The idea he mentioned comes from Rome, and

asked how he accomplished this seemingly extraordinary feat.

Somewhat shamefacedly, he produced a few large disks of cardboard, varying in size and pivoted to revolve concentrically. Upon the inner circle were written names of places where picturesque material might be visualized—such as Venice, the Bay of Naples and the Alps. Upon the next circle, atmospheric conditions were noted, such as rain, clouds, snow, and the like. Then came seasons of the year, times of day, and various other descriptive phrases. The result was that by revolving the disks in the manner of a roulette-wheel, the penniless artist had, within his hand, the key to some ten thousand varying compositions or subjects for painting. As an example, we may say that one reading across the concentric disks gave something like this. The Bay of Naples—foggy morning—pirate-sloops—prevailing tones blue and silver. Or, again, The Alps—sunset—stormy sky—red stones in foreground. And what do you suppose the poor artist had named this magical genius? He called it, the "Soup-Pot!" And so to him it

truly was, for without it he would probably have starved to death! Possibly we do not all require a "Soup-Pot," to stimulate our lagging imaginations; yet I am going to confess to you that there is a very good imitation of the young artist's device reposing in my private desk right now, against the day of need.

The best outfit for practical residence-work of the better class, is a matter of individual preference. Each expert of the lens and shutter will give you the suggestion of a new one. Here is one from the architect's standpoint. First, a good convertible anastigmat, such as a Series I Velostigmat, or a VIIa Protar, fitted to a reflecting-camera embodying the reversible back and double-extension features and provided with a liberal rising-front. This outfit, with a couple

of good filters and both plate-and-film attachments, is well suited to general- and detail-work; and, in fact, to every requirement except interiors. For this, a compact pocket-camera using the same size of plates and film as the larger one, and fitted with a lens of short enough focal length to take an angle of ninety degrees, will serve nicely. Of course, the negatives are to be enlarged, as virtually all the best residence-work is finished in this manner.

The final print may be made in first-class sepia, platinum, or colored effects; and few owners—or architects either for the matter of that—can resist a really first-class enlargement of good size, especially if the negative was made by an artist with imagination. And if imagination flags, why there's still the "Soup-Pot!"

Stock-Solutions



AMATEUR photographers who undertake the development and printing of their own negatives and carry out the entire procedure attached to the production of a finished photograph, may be divided into two classes—those who rely on developers, toners, etc., which may be bought ready to use, and those who prefer to make up their own solutions from the original chemicals. The latter class is probably in a considerable majority compared with the former: and, even if this were not so, there are always a number of photographers who delight in formule and in knowing exactly the constituents of the solutions they use and the part the chemicals play in the production of their photographs.

Developers that are in most frequent use by the amateur who makes up his own solutions are pyro, metol (or one of its equivalents such as Monomet), hydroquinone and amidol. The worker with these chemicals at hand has a range of developers to meet every contingency for plates, films and papers.

The photographer, whether amateur or professional, who has become wedded to the use of pyro as a developer for plates or films, is apt to be extremely conservative, and nothing short of actual necessity will make him change to the use of another developer. Even then, he will never admit that any other developer will give him just the pearly quality, range of gradation and correct density that his own pet pyro formula is capable of producing so satisfactorily.

To a certain extent he is right: for a correctly exposed plate, properly developed with a well-balanced pyro developer, produces a negative very difficult to excel, either as a medium for producing perfect prints or as a thing of beauty in itself—and there are many negative-lovers still, first cousins of the amateurs above referred to, who derive pleasure from watching the marvel of a plate's development.

For the experimenter who likes to try a variety of formule, ten-per-cent stock-solutions are ideal. In the case of pyro, one-half ounce of potassium metabisulphite is dissolved in eight ounces of boiled water. When perfectly dissolved, one ounce of pyrogallie acid is added, and the bulk of water made up to nine and one-half ounces. Each ten minims of this stock-solution will then contain approximately one grain of pyro and one-half grain of potassium metabisulphite. The solution, moreover, will remain water-clear for a long time. In fact, if kept in full and well-stoppered bottles, it should keep clear for several years. With this stock-solution available, it is possible to make up a great variety of pyro formule, bearing in mind that the large quantity of metabisulphite is present for the purpose of keeping the solution clear and reducing pyro-stain to a minimum.

If this stain is required and a negative more yellow in color is wanted, the metabisulphite can be reduced to, let us say, one-quarter ounce, or even less, in the stock-solution, but the solution itself is not so likely to keep clear for so long a period as may be desired.



ICE-CAPPED PILES

JAMES ALLAN

A formula that has appeared from time to time, with which this stock-solution can be employed, one which produces negatives very perfect in quality, is made by diluting two ounces of the pyro stock-solution, just described, with eighteen ounces of water, and using this in conjunction with a No. 2 solution made up of two ounces of sodium carbonate (crystallized) and two ounces of sodium sulphite (crystallized), dissolved in twenty ounces of water. Equal parts of these two solutions will give an admirable developer for all plates and films: and when one ounce of each is diluted with twenty ounces of water, an excellent stand or tank developer is obtained.

Metol and hydroquinone can also be made up advantageously in ten-per-cent solutions, and here, too, it will be found that a formula similar to that given for pyro, with potassium metabisulphite, will answer every purpose. If sodium sulphite is used, however, in place of the potassium salt, a larger quantity is necessary, and care should be taken how the mixture is made to avoid a precipitate. Metol is a developer with curious characteristics of its own, when in combination with other chemicals. When making up strong stock-solutions of this developer, it is as well to

remember that the metol should be dissolved first in warm water, and only a small proportion of the preservative added to keep it from oxidizing immediately. The remainder of the preservative should then be dissolved separately in water sufficient to make up the total bulk of the stock-solution, and the two solutions mixed. Otherwise it will be found that if an attempt is made to dissolve the metol in a strong solution of sodium sulphite, the metol will only partly dissolve; and, if the solution is hot, further metol will be precipitated as it cools.

The same thing applies when making up a one-solution metol or metol-hydroquinone developer. In this case, the metol and a little of the preservative should be dissolved first, and the remainder of the sulphite, plus the sodium carbonate, dissolved separately and added.

The worker who wishes to make a very concentrated metol-hydroquinone developer will find that sodium or potassium caustic, used in the place of sodium carbonate, will enable a solution to be made of higher concentration than would otherwise be possible. Dissolve in eight ounces of warm water fifty grains of metol and one hundred and eighty grains of hydroquinone.



OUT OF THE CLOUDS

W. J. JAYCOCK

When these are dissolved, add sodium sulphite (anhydrous) one and one-half ounce. This will produce a thick mixture. One hundred and thirty grains of caustic soda (sodium hydrate) should then be added, and the mixture well shaken until it clears, which will happen as soon as the caustic soda is completely dissolved. The solution will then represent a highly concentrated M.Q. developer, one part of which added to nine of water will produce a good-working developer for plates or films. With double the quantity of water and two drops of ten-per-cent potassium bromide solution added to each ounce, an excellent developer for bromide paper is at hand. The strong solution keeps well, and it is a good plan to make up several small quantities, let us say five ounces or so, and keep in well-stoppered bottles rather than larger quantities.

In making up stock-solutions, whether for

developers, toning-solutions, or other purposes such as the bromoil-process, it will generally be found that a concentrated solution in a well-stoppered bottle, and with the bottle completely filled, will keep much better than a diluted solution. Where possible, distilled water is to be preferred for stock-solutions that are to be kept any length of time. Failing this, well-boiled water that has been allowed to stand and cool after boiling is a good substitute for distilled water for most photographic stock-solutions.

I. P., in *The Amateur Photographer*.



TRUE art endures forever, and the true artist will be beyond the reach of the world's misery.

Beethoven.

While the Prints Washed

MICHAEL GROSS



HE sign on the door read: THE ECONOMY STUDIO and—though few knew this—it was the economy of the two partners who owned the place and not the savings enjoyed by the customers, that gave the business its name. A sample of that economy was being practiced as this story opens. While daylight had lasted, both Mack—a handy abbreviation of Clarence Patrick Magillcuddy—and Fred Disston, the other partner, had been on the roof of the dingy tenement in which their “studio” was situated, making the eighty prints necessary to finish up a rush-job. By the fading light of the same sun, the pictures had been toned and fixed. Now the prints were being washed in the large tank against the wall of the darkroom. (The appellations “tank” and “darkroom” are used in an effort to create an impression, the former being, in truth, merely a washtub and the latter the room intended originally for the kitchen.) Night had fallen before the washing-stage in the process was reached; but the gas-jet remained unlighted. In semi-darkness the prints were placed in the tub and the water turned on. Then the partners, tired from the day’s work, stretched out at full length on the bare floor of the room, made a pillow out of one of the carrying-cases, and prepared to snatch a little rest during the half-hour necessary to complete the washing.

The room was now in total darkness, it being Mack’s contention that: “prints don’t have to see to wash themselves the way humans do, and a dime saved on gas is as good as a dime saved any other way,” a sentiment to which Fred agreed heartily—especially when dimes were as scarce as they had been for the last few months.

“We were trying to discover which one of us knew more about photography,” Mack suddenly remarked, resuming a conversation that had been begun up on the roof, during the afternoon. “Now is as good a time as any to finish the discussion,” he went on: “where did we leave off, Fred?”

“Well, we went all through developers and were beginning on Hypo,” Fred answered. “And it’s your turn to ask a question, too.”

“Right, you are,” Mack answered, lapsing into his native idiom, as was his wont when deeply interested. “I suppose you know that Sir John Herschel, the English scientist, discovered the properties of hyposulfite of soda and its action on

the salts of silver back in the year 1819; don’t you?”

“I do,” Fred answered; “but you don’t seem to know that hypo is of greater specific gravity than water and that as the water removes it from a plate or print the hypo drops to the bottom. If you knew this, you wouldn’t try to wash prints by putting them face up in a tray of water, the way I have seen you do. You would float them face down, so that the hypo could fall out of the paper, so to speak, to the bottom of the tray.”

“Score one for you,” was Mack’s reply. “And while we are on the subject of hypo, do you know that fixing a plate does not destroy the action that the light has had on the photographic emulsion? In other words, if you are on a tour and want to be certain that your plates will keep, you can fix them in a hypo-bath right after the exposures are made and then develop each plate when you get home. The only thing to remember is that the exposure must be from four to six times longer than usual. Of course, you can’t use a regular developer; a special Ammonium Sulphocyanide solution should be mixed for the purpose and the time of development is slow, sometimes twelve hours being required.”

“I wasn’t aware of that,” Fred confessed; “but I did know that it is possible to develop a plate and then treat it so that it will not be sensitive to light without putting it into a hypo-bath, at all. This knowledge is very useful when one is traveling and wants to be sure that his exposures are right without wasting the time necessary to give each plate a hypo-bath. All that is necessary is to take the plate out of the developer, rinse it, and then place it in a solution made of a half-ounce of potassium bromide and five ounces of water for five minutes. Rinse the plate again and dry it and you can now take the negative into daylight in perfect safety, or even make gaslight or bromide prints from it. A solution of five ounces of water, a half-ounce of alum, and thirty grains of citric acid will give you the same result.”

“That’s a new one on me,” it was Mack’s turn to confess. “But, speaking of making prints, did you know that if you have a weak, flat negative on which intensification will have little or no effect, you can get a brighter and more contrasty picture from it by printing it under a green glass on printing-out paper than by any other process? This is because the green glass cuts down the violet and deep blue rays of light,



FORSAKEN

W. H. C. PILLSBURY

allowing the bright blue, green and yellow rays to reach the paper more freely. And did you know that the finest non-halation plate would be one in which the emulsion was spread upon a green sheet of glass?"

"Colored glass reminds me of a piece of information I picked up, the other day," Fred remarked. "You use a yellow ray-filter to make sure of getting the clouds in the sky you are photographing; don't you? Well, do you know why a yellow piece of glass in front of the lens causes white clouds to photograph so well?"

"It's something about holding back one color to give another a chance to make an impression, isn't it?" asked Mack, plainly puzzled.

"Not when you're photographing clouds," Fred answered. "Here's the thing in a nutshell. Why don't clouds come out well in ordinary photography? Because they are white on a blue sky and both white and blue photograph as white. Very well, then. You put a yellow piece of glass in front of the lens. What happens? The yellow rays of the filter combine with the blue of the sky and turn this blue to green, which is always the result of superposing yellow on blue. Green being one of the colors that affects a photographic emulsion very little, if at all, the emulsion covered by this color remains white. The white

clouds, on the other hand, do affect the plate. Consequently, when the image is developed and the negative printed, we get a gray sky streaked with white clouds."

"A simple and practical explanation," Mack approved warmly. "And while we're on the subject of queer twists of photography, do you know that if you were to put a twenty-five-cent piece up in a bright light and look at it closely for twenty minutes, then go into a darkroom and stare at an unexposed plate for another twenty minutes, you will discover, upon development, a faint image of the quarter on the negative? This proves conclusively that it is possible to photograph the image which remains in the retina of the human eye."

"Are you sure about that?" Fred asked, in evident bewilderment.

"I've never tried it," was the answer, "but W. Ingles Rogers, of England, performed the experiment in 1896, using a shilling piece, and he says that it was successful. I don't see why it oughtn't to work out with a quarter. If we ever get together a quarter, at any one time, we'll have to try it for ourselves. We'll want a picture of the coin, anyhow."

"It's almost as hard to believe that story as the one concerning the experiment tried, in 1895, by



FEEDING BOBBY

ROSS W. BAKER

Professor Jordan. He placed seven men in front of his camera and asked each one of them to think of a cat. Each man did so, and when the plate was developed the faint image of a cat was discernible across the entire length of the plate."

This last piece of photographic information seemed to be the "knock-out blow"; for after it the boys lay in silence, the splash of the water as it fell into the tub being the only sound that came through the darkness. After awhile even this noise ceased, although both Mack and Fred, now half-asleep, failed to notice the fact.

Suddenly Fred jumped to his feet with a howl, Mack, startled out of his wits, put out his hands to rise—and then let out a yell of: "Sufferin' cats!" By this time Fred had reached the match-box. Another moment and the gas-jet blazed up, lighting the entire room with a dazzling, yellow brilliance. The scene that lay

disclosed before them made both boys add another yell to their first one. Almost an inch of water covered the entire floor and the eighty prints were floating around in all directions.

"I may not know as much as you do about photography, Mack," said Fred a few moments later, as, barefooted, he walked around the room gathering up the prints; "but there's one thing I do know that you don't. I've got sense enough to understand that it is absolutely impossible for water to go down the waste-pipe of a tub when some confounded idiot has plugged the rubber-stopper down tight into the opening. And I'm not mentioning any names, either, so you can use your own judgment as to whom I mean."

And Mack, realizing that he was at fault, said never a word but kept paddling around after the floating pictures.

Tracing Defects in Negatives



THE perfect result in photography is dependent so essentially on the absence of the many conditions which can introduce defects, that it is difficult for anyone but the individual worker to say with any certainty what is the cause of spots or fog or any of the miscellaneous ills which beset gelatine negatives. Yet, despite this fact it is part of our daily work to do what we can to locate the cause of one defect or another in negatives which are sent to us by our readers. Without wishing to discourage any of these latter from their habit of seeking such help as we can give them, it must be admitted that in many cases all that we can do is to make a guess at the cause and to leave the correctness of our guess to the further judgment of the inquirer. In some instances, perhaps, our suggestion may indicate a cause which had not been thought of; in others, no doubt, such cause had been eliminated definitely by the inquirer's knowledge of his working-conditions. At any rate, it seems useful to offer a few notes on the general plan which may be followed in endeavoring to come to a decision as to the cause which makes a negative defective in one way or another.

Probably the defect which is most frequently brought to our notice is a general fog or veil over the negative. In this connection, it seems not to be realized by many quicrsts that very different causes may lead to an almost identical effect, and that the solution of the problem lies more in an examination of the working-conditions than of the negative. From the latter it is impossible to say whether the fog is light-fog or chemical fog—that is to say, if it is produced by action extraneous of light in conjunction with a properly compounded developing-bath or has its origin in the faulty development of a plate which has been exposed only to light reaching it in the correct manner through the lens. Certainly, the negative does give some slight guide in these circumstances—namely, by the appearance of the narrow margin of the plate which usually is shielded from light during exposure in the camera by the rebate (rabbet) of the plate-holder. If this narrow edge is reasonably clear and free of fog in the negative, it follows that the cause of the fog must lie in the kind of image which is formed on the plate, and cannot very well be the result of a faulty developer or an unsafe darkroom-light, either of which would affect the plate up to its extreme edges. Thus the condition of these rebate-edges in the negative is a first hint of the direction in which to look further for the cause of the defect. If the

edges are clear, the fogging of the plate is most probably due to a dirty condition of the lens or to the illumination of the inside of the camera to an extent which can cause a general veiling of the plate during the period of exposure. The two things often go hand in hand; but even when the lens is free of a coating of dust which causes it to distribute light over the plate somewhat like a window of frosted glass, the conditions may be such that the fog comes from light reflected from the interior of the camera on to the plate. The wide angle which the modern anastigmat covers is responsible for fog from this cause: the interior folds of the bellows come within the cone of illumination from the lens and cause veil by reflection on to the plate. It is here that a lens-hood or a diaphragm placed within the camera proves to be of positive benefit. The reputation of the older types of R.R. and single lenses for bright images probably arises as much from their deficiency in angle of illumination as from their optical qualities *per se*. Moreover, the use of the wider angle anastigmat has extended along with a reduction in the dimensions of cameras and with the growth in popularity of the taper-bellows, which explains why a given lens will yield brilliant negatives free of any suspicion of veil on an old-fashioned camera of the square-bellows type, whereas an exactly similar lens in a taper-bellows camera will give trouble from veil.

When we come to the causes of general fog over the whole area of the negative, one of the things which will, of course, occur at once is want of safety in the darkroom-illumination. This may arise either from leakage of white light into the darkroom or from passage of actinic rays through the safelight of the darkroom-lamp. A little hint as regards the former is worth mentioning, since we know that it has proved the means to trace leakage of light which remained undetected until it was used. It is simply to lay a piece of mirror in the empty developing-dish, and with all lights extinguished to examine the mirror for any reflection of light. It may happen from the special way in which a darkroom has been fitted up, often by partitioning off part of a larger room, that outside light finds its way to the developing-dish from a source which cannot be seen unless one can take a look around exactly from the position which the plate occupies. The mirror enables one to do this. As regards the darkroom-light itself, the production of fog from this source is readily detected by the usual plan of laying a plate in the developing-dish in total darkness, at the same time laying one or

two coins on it. If then the darkroom-light be turned on and the developer applied for, let us say, ten minutes, the presence of any insecurity from this cause should be revealed by the production of the outlines of the coins on the plate. In making such a test as this, it is too often forgotten that the safety of a darkroom-light increases considerably with the distance from it; it will not do to make the test with the developing-dish three feet away and then expect an equal safety of illumination if plates are handled or developed close to the lamp.

If tests for the unsafeness of the darkroom-light yield only negative results, the trail for fog must be followed in the composition of the developer or in its contamination during use. We have known cases where fog, which for a time baffled detection, was traced in the end to

using the anhydrous instead of the crystallized form of sodium carbonate. By virtually doubling the proportion of carbonate in the developer it is obvious that, with many formulae, fog is bound to be produced. But, perhaps, the most common cause is contamination of the developer with hypo, brought about very often through belief that the darkroom-towel, which is regularly in use for wiping fingers which have dabbled in the fixing-bath, actually cleans them thoroughly of hypo-solution. As we emphasized in a note, not long ago, the darkroom-towel too often serves as a distributor of hypo, and a rule should be made to confine it to its proper purpose, which is for drying the hands after they have been rinsed from any chemicals under the tap. The importance of these precautions cannot be overestimated.—*The British Journal*.

Keep that Camera!

C. B. WEED



It has been impressed forcibly upon me, time and time again, that the saying, "A real photographer is never seen twice with the same camera," is true. I believe that this is the reason that so many fail in photography and that others get only so far and no further. This is also why so many call photography an expensive hobby.

From my own observation, I know that the man who is always thinking about some camera or lens that he wishes he had, will not be satisfied until he has it. Even if his present outfit be an expensive one, he has seen another kind with some new feature that attracts him; and, when he goes out on a picture-making expedition, he thinks more of what he might do if he had that other camera than he does about getting the best results with the one he has. He sells his camera for a price that is fifty per cent less than he paid for it, a short time ago, and gets a new camera. He uses it for a while and his results are not in the least better than before. This procedure is repeated. Each time he hopes that he will find "the perfect camera" and, finally, he becomes more and more discouraged with photography because of his only partial success and his financial loss.

The remedy for all this is to *keep that camera*, the one you now have—be it a Brownie or a Graflex—and to master it under all conditions of picture-making. The trouble with this re-

peated buying of cameras is that before one really understands one camera and can use it intelligently, he sells it and buys another. If he would keep one camera and learn to use it, he would find that the results would improve.

The person who keeps a camera only a short while, always makes it responsible for his failures, never considering that he, himself, perhaps, is at fault for not understanding its use. As an example, a friend of mine had just bought a Graflex and, during a subsequent cruise, made many exposures with it. His results were all failures. He blamed his camera, as usual; but in examining it, I told him that the trouble was that he did not know how to use it. A difficulty was that the lens-board had become detached from the uprights provided to hold it parallel to the plate. It had become wedged into the upright so that the lens did not fall out but was at an angle of fifteen degrees to the plate and, of course, it was not light-tight. Hence, the utter failures. He is using that same camera to-day with marked success. Moral, understand the mechanism of that camera you now have, for with it you can do as good work as with any other, if you understand its limitations. In nine out of ten cases the worker who "is never seen twice with the same camera" will not believe this statement. A friend of mine has been using only one model of camera for fifteen years and the results he obtains are remarkably good because he and his camera are co-ordinated.



GEORGE EASTMAN



STEAMBOAT ON SACRAMENTO RIVER

E. M. PRATT

Contrast this with the individual who always uses a different camera whenever he makes a picture, and you will see why one obtains good results and the other poor ones.

Why is it that the man who is continually changing cameras never has any really good prints to show; and that he who uses but one camera for all his work,—manipulates it intelligently, uses a color-screen and attaches a lenshood when necessary,—usually has some excellent prints to exhibit?

One loses pecuniarily by buying and selling repeatedly not only on the original cost of the camera but in supplies, because all these failures cost money in plates, paper and accessories. For example, a man changes from a camera fitted with a between-the-lens shutter to a Graflex with focal-plane shutter. The latter style of shutter passes three times as much light with the same exposure as the former; hence, not knowing this, he makes the exposures incorrectly if he bases them on his experience with the between-the-lens type of camera. The result is a loss in the cost of plates. No wonder that some call photography an expensive hobby!

Indirectly connected with the foregoing facts, is this one: not only to use one camera—or two, one of which should be a small pocket-camera

and the other any larger model that one may choose—but to use one lens, a *very* few reliable makes of plates,—one ortho and one extra-rapid are sufficient for all ordinary work—one standard developer, and two or three standard makes of paper. By so doing, one stops guess-work. One becomes familiar with the equipment and learns just what can be done with each *with certainty*. The person who is always using something different in photography—whether it be a camera or developer—*hopes* to obtain results; but he who “sticks” to one camera and understands its manipulation *knows* that he will obtain uniformly good results.

Therefore, keep that camera you now have; for, if it is a Brownie, you can do good work with it provided you understand its limitations. The moment that you override these limitations, you will fail. Learn what these are, and do not buy a new camera just because you are pecuniarily able to do so. Of course, some make the collecting of cameras a hobby; but these camerists are really not so much interested in the making of good pictures as they are in the mechanical equipment of various outfits. Let me repeat; keep your present camera, learn to use it intelligently and see if your photographic results do not improve.



MUKUNTUWEAP VALLEY

From National Parks Association

J. K. HILLERS

Photographing Zion Canyon Fifty Years Ago

EYRE POWELL

WITH the recent setting-aside of the Utah wonderland, Zion Canyon, as a National Park, a spectacular, new field is opened to the camerist who is an ardent lover of nature. The huge gorge itself, the immense rocky amphitheaters which look like titanic stage-settings for some immense drama of nature, the tremendous panoramas, and a sky-line that artists rave over—all await the photographer who is clever enough to portray them adequately. Already, hundreds of camera-exposures have been made in Zion Canyon, and among these there are very few pictures that do the new National Park justice. Indeed, one of the best at present on record was made not recently, but *nearly fifty years ago*.

When President Wilson signed the bill which set aside the Zion Canyon region as a permanent playground for the American people, a search was made in the archives of the Department of the Interior at Washington for data and photographs of the new park. There, in an old album, were found several eleven by fourteen prints of the canyon, marked as having been made by J. K. Hillers. Two of them—one illustrating the huge "Angel's Landing" rock, and the other the "Three Patriarchs"—were undoubtedly the best pictures of the famous canyon that were at hand.

Hillers, himself, is well known as a member of the Powell expedition that explored that part of the country shortly after Powell's famous trip



From National Parks Association

ANGEL'S LANDING

J. K. HILLERS

down the Grand Canyon. That was almost fifty years ago, and it seemed hardly possible that the negatives were still serviceable. A search of the files was made under the numbers indicated, and the negatives have not only been found, but they are in perfect condition. Present-day photographers have gone to Zion Canyon in fast automobiles from the railroad at Lund, Utah. Once there, the photographer finds that picture-making is comparatively easy with the facilities offered by modern plates, fast lenses and all of the other photo-accessories developed since Hillers' day.

However, when Hillers went in to Zion Canyon it was with one of the first portable cameras equipped with a lens that was slow. The eleven by fourteen wet plates were still slower, and they had to be sensitized and developed at the place of exposure.

The camera was carried in by ox-team from Salt Lake City—an overland-trip of three hundred and fifty miles from what was then the end of the Union Pacific Railroad. The party was in danger many times because of the Apaches of Geronimo's early day. They suffered hardships, as well as peril; but through it all Hillers—then a young man—kept his bulky outfit intact.

A covered wagon was converted into a crude darkroom in which he prepared and used the collodion and nitrate of silver to coat his plate-glass. Here, also, he did his developing after the long exposure was made. But there is one picture, among those discovered, which proves that Hillers carried and used his camera far from the nearest approach of any wagon. How it was done, will remain a mystery to anyone who has tried to reach the spot with a camera even in these modern times.



From National Parks Association

END OF THE NARROWS

J. K. HILLERS

Far up Zion Canyon, the gorge narrows down to less than twenty-five feet in width, between parallel walls twenty-five hundred feet high. The river covers the bottom from side to side and is from two to four feet deep. In places, the width is but fifteen feet, and the irregularities in the walls obscure the view of the sky so that the place has all the character of a tunnel. There are nine miles of this tunnel-like formation until the gorge has climbed up out of the red rock of the main canyon into the white of the plateaus above. It was to this point that Powell penetrated, and there Hillers made a picture.

The writer will not attempt to explain *how*; but here is a print of the picture to prove that he *did*.

It is no pleasure-trip even, for a man with a small camera and modern film which does not have to be bothered with until he is out! The writer has tried it himself.

How Hillers guarded his precious plates, through adventure after adventure, would make a story in itself. He brought them back to Washington where they were filed away, to be brought to light only after many years had passed and the marvels of the region they showed had been so substantially recognized.

He is an exceedingly old man now; but Zion Canyon still offers adventure to the photographer who likes the unknown, as well as to the one who is content with the already traveled part. Much of the new park is still to be opened up by trails, and there are canyons touched by few white men, magnificent amphitheaters and unclimbed peaks from which the views must be wonderful. In the main canyon, which is accessible by road and trail from the Wylie camp, there are scenic opportunities to which full justice has never been done.

A complete set of filters should be carried, as the colorings are many and brilliant. Reds, from a deep blood-color to a light salmon-pink, contrast with pure cream-whites. There is much green foliage on the canyon floor, and it is not at all without cause that Zion Canyon has been called the "Rainbow of the Desert."

The heights are so tremendous, that a view-outfit with adjustable back would get the best results, although some very excellent pictures have been obtained with a 4 x 5 Speed Graphic with, however, the loss of some of the effect of the great heights.

To the operator with a panorama-outfit, Zion Canyon offers remarkable opportunities, including several views that are destined to become fa-

mous, but which, so far, have not been touched. The magnificent Court of the Patriarchs, with the triplet-mountains of the Three Patriarchs themselves standing on guard, has not been depicted as a whole; and yet it is one of the scenic features of America, as, indeed, is the whole place.

At the entrance to the park are little Mormon settlements which were founded by Brigham Young. The inhabitants—fine, upstanding, hospitable people—are picturesque and constitute themes for striking character-studies. Their homes and farms are just as they were in the great Mormon leader's day and, surrounded by the utterly indescribable scenery of the region, form a combination to delight an artistic camera-man's soul.

Computing-Charts Make Possible Quick Focusing When Enlarging or Copying

THOMAS B. BROWN, Ph.D.



HE charts which accompany this article permit obtaining, in a moment's time, the distance from the plate to the easel which is needed to produce any desired degree of magnification or reduction when either enlarging or copying; and they thereby reduce the process of focusing from the usual troublesome cut-and-try method to one of setting the easel at the correct distance and then racking the lens into position for sharp focus.

Credit for the suggestion, that the focusing for enlarging and copying be accomplished in this manner, must be given to Mr. F. C. Davis, who advances it in his article in the November PHOTO-ERA. The idea is an admirable one; but, unfortunately, for the application of the rest of his article, optical formulæ have a dignity that cannot be unduly tampered with, and they fail to function properly when abbreviated to the extent involved in the "simplified" formula which he gives for computing the distance from plate to easel. So that, although for the example given in his article—that of a ten-times enlargement with a lens of eight-inches focal length—the value computed by the "simplified" formula is within one per cent of the true value, for almost any other ratio of enlargement the discrepancy will be far from negligible, as many may have discovered by actual trial. For a three-times enlargement with a lens of eight-

inch focal length, the "simplified" formula gives 28.8 inches, but the correct value is 42.8 inches! On the other hand, it does not follow of necessity that the photographer, whose inclinations are more artistic than mathematical, should be required either to grapple with formidable formulæ or to continue to work by the cut-and-try method; and even those for whom mathematics holds no terrors will welcome, I am sure, a short-cut which saves most of the time of computation, yet gives a strictly accurate result.

Such a short-cut is supplied by the two accompanying charts. The development of the theory and methods for the construction of *alignement* charts, as they are called, is due largely to the French mathematician, D'Ocagne. By Chart II, the process of computing the distance from plate to easel is reduced to the location of two points, the drawing of a straight line, and the location of a third point which gives the required distance to an accuracy between 1 and 1/5%, exactly as would be obtained by computation with the complete, unabridged formula. Further, since it is my experience that the worker is more likely to know the dimensions of his original and those of the desired enlargement or copy, than to know the number of times magnification or reduction desired, I have supplemented this chart by a second, Chart I, which in a similar manner computes the times enlargement—magnification—or reduction from these dimensions.

Moreover, if both dimensions of the original are known, and only one dimension (height or width) of the enlargement or copy, the other dimension may be obtained immediately from this same chart.

Use of Chart I. (a) To obtain the *times enlargement* when corresponding dimensions of the negative and of the desired enlargement are known: Read on the right-hand scale the value of the dimension of the negative, and on the left-hand scale the value of the corresponding dimension of the enlargement. Join the two

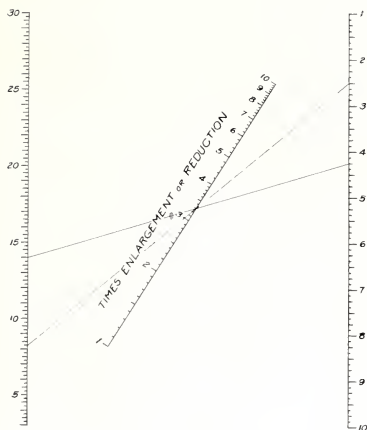


CHART I

points thus located by a straight line. To avoid drawing a line on the chart, a fine black thread may be stretched across the chart so as to touch each of the two points; or more elegantly, a fine straight line may be scratched on a strip of transparent celluloid of sufficient length, and this strip laid scratched side down across the chart so that the scratch touches both points. Read at the intersection of this line with the axis of the diagonal scale the times enlargement. Note that the diagonal scale is divided into *tenths* as far as 4, and into *fifths* the rest of the way. Smaller subdivisions may be estimated when the line crosses between two of the marked ones.

Example: An enlargement 14 inches high is to be made from a negative $4\frac{1}{4}$ inches high.

The light line drawn on the chart connects the point 14 on the left scale with $4\frac{1}{4}$ on the right, and crosses the diagonal axis at 3.3. It is, therefore, a 3.3-times enlargement.

(b) To obtain the *width*—or, height, as the case may be—of an enlargement, when both dimensions of the negative, and only the height—or width, in the alternate case—of the enlargement, are known: First obtain the times enlargement from the known heights, as directed above. Then find the width of enlargement for the same magnification by passing a straight line through

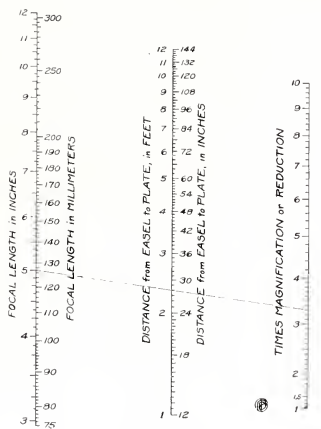


CHART II

the *same* point on the diagonal axis and through the point on the right scale corresponding to the width of the negative, and read the width of the enlargement at the intersection on the left scale.

Example: An enlargement 14 inches high is desired from a negative $2\frac{1}{2} \times 4\frac{1}{4}$ inches high. The times enlargement, as found above, is 3.3. The light dash-line passing through the same point—viz. 3.3—on the diagonal scale and through $2\frac{1}{2}$ on the right-hand scale crosses the left scale at $8\frac{1}{4}$. The enlargement is therefore $8\frac{1}{4} \times 14$ inches high, and is 3.3 times larger each way than the negative.

(c) To obtain the *times-reduction* and the *width*—or height—of the copy, when the dimensions of the original and the height—or

width—of the copy are known: Read the height of the original on the left scale, and the height of the copy on the right scale. Join the points thus located by a straight line, and read the times-reduction on the diagonal scale where the line crosses it. Read the width of the original on the left scale, join the point thus found with the same point on the diagonal scale, and read the width of the copy on the right scale at the intersection.

Example: A copy $4\frac{1}{4}$ inches high is to be made of a picture $8\frac{1}{4} \times 14$ inches high. The light line drawn on the chart connects the point 14 on the left scale with the point $4\frac{1}{4}$ on the right, and crosses the diagonal scale at 3.3. It is therefore a 3.3-times reduction. The light dash-line passing through the same point—viz. 3.3—on the diagonal scale and through $8\frac{1}{4}$ on the left scale crosses the right-hand scale at $2\frac{1}{2}$. The copy is therefore $2\frac{1}{2} \times 4\frac{1}{4}$ inches high, and is 3.3-times smaller each way than the original.

Use of Chart II. To obtain the distance from easel to plate from the focal length of the lens used and the times magnification or reduction desired: Because in this country focal lengths are stated sometimes in inches, and sometimes in millimeters, both are indicated on the scale. If the same lens is always used for enlarging or

copying, the procedure may be simplified by pivoting the celluloid-strip to the chart by a slender pin passing through the index-line and through the point on the left axis corresponding to the focal length of the lens used. Read the focal length of the lens on the left scale, and the times magnification or reduction on the right scale. Join the two points thus located by a straight line, and read the required distance from easel to plate at the intersection, center scale.

Example: A 3.3-enlargement is to be made with a lens of 5-inch or 127 mm. focal length. The dash-line joins 5 inches on the left scale with 3.3 on the right scale, and crosses the center scale at 28 inches. Because the divisions on the scales of this chart crowd closer and closer together as the values increase, the smaller subdivisions are dropped out towards the top. However, this does not indicate a decrease in accuracy, because as the values increase, the value of one subdivision becomes a lesser and lesser per cent of the whole. The easel should, therefore, be 28 inches from the plate. There are two separate positions of the lens such that it will be in sharp focus, and the result will be a 3.3-times enlargement, or a 3.3-times reduction, depending upon whether the lens is nearer to, or farther from, the original when in sharp focus.

The Future of Color-Photography

WINN W. DAVIDSON



ALTHOUGH the long list of orders that awaits the return of the Autochrome to the American market is evidence of the popularity of that process, it is not necessarily an answer to those who are not enthusiastic over the future of color-photography in general.

Very convincing arguments have been put forward to show that even if we had the perfect process for color-photography, its artistic future must still be very limited. But it is well to remember that the imagination of Jules Verne proved to be truer than the logic of the mathematicians who proved that the square of the flying-capacity could never overtake the cube of the weight and that, therefore, the airplane had not already been invented.

The very recognition of the obstacles in the path of color-photography is a long step in the direction of progress. By pointing out the diffi-

culties, we establish a goal. The art will arise that will achieve the mark set for it; there would be no art were there no difficulties to be overcome.

It is not contended for a moment that the Autochrome cannot reproduce colors exactly as they are. Even magenta with its equal balance of red and blue, so easily disturbed by faulty exposure or development, has yielded to the skill of the practiced worker.

Indeed, this very facility in reproducing colors exactly as they are is the most serious indictment brought against the color-processes.

If a painter matched carefully every shade and variation of color in his subject, he would not necessarily be an artist. The large color-masses of the sky and a house and a group of trees may not clash to the eye, because they are not seen as a unit. But compress them to the confines of a color-plate, and the effect may be hideous.



HENRY C. COWLES, M.D.
THERON W. KILMER, M.D.

Two difficulties are involved. The photographer may be deficient in his sense of color-harmonies; his training has been in line and tone and he fails, in the first place, to select a pleasing composition in color. Or, if he make a proper selection, the small-scale reproductions may fall short of the desired effect because the colors have not been varied from the original; that is, a small patch of color on the plate fails to produce the same effect as a large expanse of the same color in nature.

That there is a decided difference between composition in color and composition in monochrome may be appreciated by a study of Sargent's painting, "Carnation Lily, Lily Rose." Show the average photographer a black-and-white reproduction of this picture, and I believe he would say to trim away a considerable strip at the left. But the photographer will defer to the painter when he sees the original with a colored Japanese lantern against a strip of green foliage; and this will appear to him as simply a matter of balance aside from any question of harmony in colors.

The improvement in color-harmony depends upon the training of the artist, and is not in the final analysis chargeable to the color-process employed.

The color-sense may be cultivated by seeing color, and learning to arrange it harmoniously. Handle flowers or colored silks, or paints, and you will be able to perceive their harmonies and discords, even if you are not able to say abstractly that such a color will go well with such another color. Study the coloring of attractive posters and magazine-covers: write down the names of the colors used if you are not blessed with a natural memory for such details. In this way, will you learn to think in color.

In these days, too, children in the elementary schools are being educated in color and can often explain to their elders that a certain color-scheme is too cold and needs a touch of red or orange to warm it up. Such children will no longer paint their crowds with all the hues of the rainbow, but will understand that their garments must harmonize with each other as well as with the surroundings, if the effect is to be artistically pleasing. All of which is laying a foundation for better work in color-photography.

Granted, then, a photographer with an unerring sense of color, let us examine the conditions under which he must work.

One important limitation under which he is generally conceded to labor is a lack of control; and it is true that it now appears impossible to doctor successfully an Autochrome by the application of color. What monochrome gray, for

instance, could match the life and fire of the Autochrome image of a prosaic cement sidewalk? Tiny edges of color—red and green and blue-violet—vivify the gray of the Autochrome and make it impossible to match with a flat wash.

The three-color separation processes are more amenable to control. It is even possible for the photo-engraver to "fake" a three-color half-tone from a black-and-white photograph, the degree of his success depending largely on his individual skill and experience. Accordingly it is not beyond reason to hope that photographers in time may acquire sufficient skill to doctor a color-separation actually made in a camera, either by shading the negatives in printing or by manipulating the dyed image after it is made.

Without a liberal degree of control, the choice of a subject is considerably circumscribed; but the worker trained to see color will probably still contrive to find a multitude of subjects upon which to try his skill. Many subjects will have to be passed by because they are not quite right; but in some cases, at least, art will find a way.

Control must be exercised on the subject rather than on the finished color-photograph. A colored scarf may drape a bit of offending color, or it may be concealed in a patch of shadow.

If some color in the subject will not give the right effect in the Autochrome, it is the place of art to substitute a color that will reproduce in the right value.

It happens, however, that portraits and other close-up compositions which are most easily arranged as regards their color-scheme, are the least apt to need modification in the reproduction. They are reproduced on a large scale and, if rendered exactly as they are, will approximate very closely to the original effect.

It would appear to follow that the most effective work in color-photography would be done in the field of portraiture. Here large masses under the absolute control of the artist are to be reproduced on a large scale exactly as they appear in the subject. The making of the color-record reduces itself to a mere matter of technique: in this field, at least, there is no reason for pessimism as to the future of color-photography. The tools await the hand of the artist.

But in the great out-of-doors, how shall we control the offending colors in the composition? Here, indeed, we must largely compose our pictures by selecting subjects that are already harmonious in their colors. Something in the way of color-modification can be accomplished, however.

Some workers with an eye for brighter color-effects than I admire, intensely every exposure they make on the Autochrome. For myself, I



PLAYFUL PUPPIES

W. C. SAWYER

hold that the compression of the landscape to the limits of the ground-glass has already intensified the colors beyond their natural brilliancy and the problem is to reduce this intensity of coloring. Accordingly I never intensify a correctly exposed Autochrome, and I am pleased with the softer color-rendering. Each artist will develop his own method.

There are those who never object to the bright blue of the sky in an Autochrome, but I generally find myself avoiding the intrusive patch of blue in its full intensity. As a background for the yellow tones of travertine it may be sufficiently attractive, but as a rule I find it too strong for a small picture.

Accordingly, when I photograph a house that would clash with a cobalt sky, I make a close-up study, boldly lopping off roof and chimneys or even a whole top story where it can be done effectively, and dispose of the sky by excluding it. In other cases I wait until the sky is milky blue or white or gray. Whatever blue is present will be intensified in the Autochrome.

An overcast sky is also quite often a harmonizer of the colors in a landscape. An asphalt road that shows unpleasantly blue on the ground-glass in the bright sunshine following a storm will take on a more conventional hue on a gray day. Many subjects in bright sunshine, however, will yield satisfactory results. Subjects in full sun-

shine with the sun directly behind the camera, as a rule, will give better results on a color-plate than in black and white.

Thus, it will be seen, that even in landscapes it is possible to greatly modify the colors by choosing carefully the light and the weather. Variations of this sort, it is true, are much less frequent in some localities than in others; but patient watching for the right moment generally has its reward.

The Autochrome is also falsely accused of certain shortcomings of which it is not guilty. For instance, it has been said that it is decidedly not a plate for dull light or small stops.

I can say positively that I have seen Autochromes exposed in dull light or with stop 64 that were as perfect in coloring and brilliancy as could be desired. For a long time, I hesitated to use the single combinations of my lens with Autochrome plates on account of this supposedly serious lack of speed and the fear that the color-correction of the half-lens would not be sufficient for the purpose. After a few trials in which underexposure was met with, I no longer have any trouble in the use of the half-lens. It is all a matter of giving sufficient exposure.

It has also been claimed that the Autochrome is not suited to distant landscapes on account of the blue effect that is produced by the haze of water vapor in the air. Personally, I have seen



SUNLIGHT IN THE GORGE

ALLEN E. CHURCHILL

Autochrome landscapes made on a hazy day that gave a perfect reproduction of the view as it appeared to the eye, and, to my taste, were superior to Autochromes of the same subjects made in clear weather. And in one case, at least, a bird's-eye view with an attractive foreground gave a really artistic picture.

In this connection, some of us can remember the day when Alfred Stieglitz was doing missionary work telling us that it was not impossible to photograph a landscape on a hazy day. How gratuitous such advice would be in this day of orthochromatic and panchromatic emulsions!

It is easy for adverse criticism to gain circulation through the medium of the printed word; but it is difficult to display the Autochromes that will refute them. Although it is twelve years since the Autochrome process was introduced, there are nevertheless photographers who have never seen one.

Widespread familiarity with the results of this process may have to await the development of the printing-press, for at present the cost of three-color half-tones is excessive for magazines of limited circulation, and photographic magazines are unable to even consider three-color reproduction.

Let a photographer once see the rare and beautiful effect of fleecy white clouds against the blue sky of an Autochrome, and he will become a convert to color-photography. There will be no trouble about contrast in such a subject, when rendered in color instead of monochrome.

Let him see in color the actual photographic image of a rainbow, and his enthusiasm will know no bounds. I have tried repeatedly to photograph a rainbow on panchromatic plates with various color-filters, but with very indifferent success. At such times, the landscape in general is inclined to be flecked with cloud-shadows and

bright spots, so that it required considerable imagination to see a rainbow in the particular light-spot where I knew one to be. Not so on the Autochrome: the image of the rainbow was as brilliant and perfect as the original.

I know one gentleman who has become such an enthusiastic Autochromist, that he no longer makes black-and-white photographs for any purpose, whatever. Incidentally, he is a collector of fine paintings and his offices are suggestive of a section in a metropolitan museum of art. You see, his color-sense had been cultivated independently.

Even the public exhibitions of the Autochrome do not always give an adequate idea of the wonderful possibilities of the process. In one exhibit of over two hundred Autochromes, I picked only one that I considered an artistic triumph—and it was wonderfully beautiful, an indoor portrait-study. Two others were excellent; and of the rest it might be said that they were technically perfect but their color schemes were reminiscent of the average bouquet gathered by a band of children at a picnic.

It is unfortunate for the effect on the public that a photographer will cling to an Autochrome that would be discarded without a qualm if it were in monochrome. Probably, he regards it as a photographic *tour de force* that has some sort of value because it is in color and comparatively rare and comparatively expensive. He treasures it simply because it is a photograph in color.

The public, on the contrary, has no special tenderness towards a picture because of the method by which it is made, and will pass by a mediocre transparency on glass with scant courtesy if you show them a paper-print artistically colored by hand.

Many able workers have probably been deterred from taking up color-work because they believe it is difficult and expensive. For the Autochrome, at least, we can say that the process is much simpler than one would suppose who tried to understand it by reading about it. A special ray-filter is the only new apparatus needed, and a good working-knowledge of exposure and development with ordinary plates is all the special knowledge that is required.

As for expense, the plates cost enough to discourage promiscuous snapshooting; but if the process is in the hands of a worker who obtains good results, the price is quite reasonable. Time-exposures with a tripod are the rule. Under-exposure, which is so common with film-cameras, could not be tolerated with the Autochrome.

This offers a certain amount of encouragement to the serious worker; for it will not be possible

to cheapen the Autochrome by the wholesale methods now applied to films. It is essentially a process that must be practical—one plate at a time. The expense will restrict its unintelligent use, and a certain artistic and technical ability is required of any who would achieve success in this particular field. On the commercial side, this all tends to assure the worker a financial return commensurate with his intelligence and artistic ability.

Apparently, the successful Autochrome-workers adhere pretty closely to the methods advised by the makers in their instruction-sheets. This may be owing partly to the cost of the plates; workers are unwilling to experiment with new methods when there is a method already at hand that assures them a large percentage of successful results. With an influx of new workers, it is quite possible that, in time, we should hear that variations in the older methods have been introduced successfully.

During the shortage of Autochromes occasioned by the war, I was compelled to use plates and developers that were quite ancient, and in some cases the results were quite astonishing.

For one thing, I learned that the Autochrome has a remarkable latitude of exposure in spite of its very thin emulsion. Exposures that were five or six times normal developed slowly in greatly oxidized developer gave the nearest approach to pure color that I have seen. The image was exceptionally fine-grained and transparent and the shadows very luminous; and the leisurely progress of development virtually removed all fear of ruining an exceptionally good exposure by overdevelopment.

Results obtained lead me to believe that we may be making the same mistake with the Autochrome that many of us make with ordinary plates, viz., we are so eager for speed, that we use an extremely energetic developer to make amends for the lack of exposure. In black-and-white photography, this would tend towards a coarse-grained image and shadows destitute of detail. In ordinary photography, I prefer to overexpose and carry on development in a pyro-developer which is deficient in carbonate of soda, and I hope to develop an analogous method for the Autochrome.

In conclusion, I should strongly advise any photographer who makes black-and-white photographs a little better than the average to try his hand at color-photography. Even if it is followed only as a pastime, it will open up a whole new world of beauty to his eyes; and he may be fortunate enough to make portraits in color of some of his near and dear ones that he will cherish as long as he lives.



THE OUTPOST OF EMPIRE

F. J. MORTIMER, F.R.P.S.



EDITORIAL



When Pictures Do Not Win Prizes

MANY contributors to the Advanced Workers' Competitions conducted by this magazine, each month for the past twelve years, have shown consistent and praiseworthy perseverance, although they never obtained an award higher than Honorable Mention. Eventually, however, most of them lost interest, and either competed rarely, or dropped out altogether. The Editor regrets this as sincerely as the disappointed competitors; for very frequently, during the course of these monthly competitions, he has seen the work of old, personal friends fail to make a successful appeal to the judges, when it would have been easy for him to bring about a verdict in their favor. But he has always felt—and that will always be his attitude—that absolute impartiality must prevail in the PHOTO-ERA jury, though it may cause the personal disappointment of a friend and, possibly, the loss of an esteemed subscriber or supporter. If the jury fail in its duty, if the artistic and technical standard of the publication were jeopardized, the awards would lose their value. Moreover, if favoritism were allowed to influence the decision of the jury, and a picture of inadequate merit receive an award that rightfully belonged to another, an injustice would be done to both. Not only that, but the deserving winner would get the impression that his picture was actually superior to that of his less fortunate competitors, when, in reality, it was unworthy by reason of obvious shortcomings. An intentionally false award might also tend to foster the belief on the winner's part that, in regard to the first prize, for instance, he had attained a higher degree of artistic skill than was actually the case. Such an illusion would be likely to act as a deterrent to his artistic aspirations, proving that an unmerited award was detrimental rather than beneficial. On the other hand, the winner—in the circumstances described—might be intelligent and honest enough to regard the award as the result of favoritism, if not as an absolute mistake, and the influence upon his artistic progress would be negligible.

In considering pictures in these competitions that have failed to impress the jury favorably, it is interesting to note that, in many instances, the cause was the presence of one single inartistic feature. The fault may have been committed

intentionally, and in accordance with the worker's understanding of the rules of composition; or it may have been the result of carelessness or haste and thus have escaped his notice. It would be easy to prepare a long list of such mistakes; but suffice it to say that, while spontaneity and truth in pictorial presentation are highly desirable qualities, harmony and unity of parts are traits of as great, if not of greater, importance; unless, of course, originality of conception is the dominating feature of the picture. The participant in a pictorial competition who is merely an impromptu camerist, and who uses his camera only casually and never seriously, should remember that a lucky, felicitous snapshot does not usually take precedence over the well-ordered pictorial composition that may be less striking in thematic novelty. Praise from sympathetic, well-meaning friends is not always a safe criterion of the supposed merits of a picture sent to us for publication or for a competition; consequently the reversal of that opinion by the PHOTO-ERA jury ought not to be taken to heart too seriously by the disappointed worker. If the ambitious contributor or exhibitor lacks experience, or has not been a good student, he cannot expect his productions to be on a level with those of conscientious, well-trained and painstaking workers. Standard books on pictorial composition are available to the serious-minded worker; so are reliable periodicals and good examples of artistic photography. Ways and means for artistic improvement are abundant, and available to the aspiring camerist.



APPROPOS of prints that have received Honorable Mention in PHOTO-ERA competitions during the past few years, one of the rules is that, although such prints remain the property of the Publisher with the right to reproduce them in these pages, at any future time, they will be returned to the owners at their request. Of course, this refers to special exigencies such as the loss of the original negative, inability to duplicate a specially fine print, or a rare opportunity to dispose of it profitably. The Publisher desires only to be considerate and fair.



ADVANCED COMPETITION



Closing the last day of every month
Address all prints to PHOTO-ERA, Advanced Competition
367 Boylston Street, Boston, U. S. A.

Prizes

First Prize: Value \$10.00.

Second Prize: Value \$5.00.

Third Prize: Value \$2.50.

Honorable Mention: Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

Prizes may be chosen by the winner, and will be awarded in photographic materials sold by any dealer or manufacturer who advertises in PHOTO-ERA, or in books. If preferred, the winner of a first prize may have a solid silver cup, of artistic design, suitably engraved.



Rules

1. This competition is free and open to photographers of ability and in good standing—amateur or professional.

2. **No more than two subjects may be entered, but they must represent, throughout, the personal, unaided work of competitors. Remember that subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era awards are announced.** Prints on rough or linen-finish surface are not suitable for reproduction, and should be accompanied by smooth prints on P. O. P., or developing-paper having the same gradations and detail. All prints should be mounted on stiff boards.

3. **Unsuccessful prints will be returned only when return-postage at the rate of one cent for each two ounces or fraction is sent with the data.**

4. **Each print entered must bear the maker's name and address, the title of the picture and name and month of competition, and should be accompanied by a letter, SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks will be sent upon request. Be sure to state on the back of every print exactly for what competition it is intended.**

5. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. However, this does not prevent the photographer from disposing of other prints from such negatives after he shall have received official recognition.

6. Competitors are requested not to send prints whose mounts exceed about 11 x 14 inches, unless they are packed with double thicknesses of **stiff** corrugated board, not the flexible kind—or with thin wood-veneer. Large packages may be sent by express.

7. Competitors who have won three first prizes within a twelve-month, become ineligible for two years thereafter. The too frequent capture of the first prize by one and the same competitor tends to discourage other participants and to make the competitions appear one-sided and monotonous.

Awards—Domestic Pets Competition

Closed November 30, 1919

First Prize: Dr. A. H. Cordier.

Second Prize: M. G. Dieterich.

Third Prize: Dr. J. B. Pardoe.

Honorable Mention: W. T. Adderley, Ross W. Baker, Harry Beeler, Nathaniel E. Brooks, Charles Burrows, Winn W. Davidson, J. T. Dimbleby, Maude Lee Eldridge, A. L. Estey, Dr. John Inglis Habbens, Rev. Leon M. Linden, C. E. McLaughlin, Herbert C. Mohr, Alexander Murray, Lewis R. Murray, Ralph F. Rhodes, J. Herbert Saunders, Joseph Coburn Smith, John M. Stafford, Edward Terrible, C. B. Weed, Paul Wierum, Leopold Zwarg.

Subjects for Competition—1920

"Twilight-Pictures." Closes January 31.

"Still-Life." Closes February 28.

"Nature-Studies." Closes March 31.

"Rainy-Day Pictures." Closes April 30.

"Miscellaneous." Closes May 31.

"Speed-Pictures." Closes June 30.

"Rural Scenes." Closes July 31.

"Shore-Scenes." Closes August 31.

"Outdoor-Genres." Closes September 30.

"Architectural Subjects." Closes October 31.

"Domestic Pets." Closes November 30.

"Indoor-Genres." Closes December 31.



Photo-Era Prize-Cup

IN deference to the wishes of prize-winners, the Publisher will give them the choice of photographic supplies to the full amount of the First Prize (\$10.00), or a solid silver cup, of artistic and original design, suitably inscribed, as shown in the accompanying illustration.

Competitors Must Mind the Rules

COMPETITORS, in the Advanced Workers' and Beginners' Competitions, continue to ignore some of the rules, one of which is that the name and address of sender, also name, month and kind of competition must be written plainly on the back of each print. Otherwise, how is the jury to know? Besides, the Editors are too busy with other matters to stop to write to the careless competitor for missing information.

This is often the reason why careless entrants wonder what has become of their prints. Let them be more careful in the future. We will do our part if they will do theirs.



THE FARMER'S PETS

DR. A. H. CORDIER

FIRST PRIZE—DOMESTIC PETS

Telephoto Lenses for Professional Work

As a body, professional photographers do not seem to have taken very kindly to telephoto lenses, evidently considering them only fit for amateur "stunts," such as making large pictures of clock-dials and weather-cocks at a distance of half a mile or so. This feeling has, I believe, been created to a great extent by the specimen pictures published by the lens-makers, who are naturally eager to demonstrate to the utmost the capabilities of their instruments. It will, perhaps, help the professional to a better understanding of the telephoto lens if we consider it as an ordinary lens of greater focal length than usual, but needing only ordinary camera-extensions—a lens, too, of which the focal length is adjustable, so that images on different scales may be obtained from the same standpoint. It will then be recognized that such a lens is a valuable tool in the hands of a practical man.

As many photographers have never troubled their heads about this kind of lens, it may be necessary to explain that in its simplest form it closely resembles one tube of an ordinary opera-glass—that is to say, it has a positive lens in front and a negative lens behind, with some arrangement for varying the distance between them. As a matter of fact, although not properly corrected for photography, it is possible to make very passable telephotographs with an opera-glass fixed on an ordinary camera. There is rather a large variety of sizes and models issued by different optical firms, but they may be divided into three classes:

First, non-adjustable—i.e., fixed focal length telephoto lenses, such as the Telecentric and Bistelar; second, telephoto lenses with an adjustment for varying the focal length, such as the Zeiss Magnar, Dallmeyer Adon, and others; and, third, portrait, rapid rectilinear, and anastigmat lenses, fitted with a telephoto-attachment, which can be screwed on in a moment, when needed, without at other times interfering with the usual work of the lens.

The first class is usually of low magnifying-power, and differs little from an ordinary lens in its manipulation. It is extensively used on reflex and other cameras for rapid exposures, and in some cases the large aperture ($F/5.6$) permits of portraiture in the studio. It should be noted that, in common with all telephoto lenses, the plate covered is small in relation to the focal length used.

The second class is useful for a wider range of subjects when rapidity of action is not essential. The little Adon is a well-known example of this type, and although simple in construction, is capable of much useful work. I therefore take it as a type to illustrate the working of telephoto lenses in general. The front or positive lens has a focal length of $4\frac{1}{2}$ inches, and the back lens a negative or minus focus of $2\frac{1}{4}$ inches. By varying the distance between these by means of the rack-adjustment we have a wide range of focal lengths. Thus with a camera-extension of 5 inches we have an equivalent focal length of $14\frac{1}{2}$ inches and a maximum aperture of $F/13$, the plate covered being $3\frac{3}{4} \times 4\frac{1}{4}$. At 11 inches camera-exten-



OUR KITTEN

M. G. DIETERICH

sion the focal length is $26\frac{1}{2}$ inches, the aperture F/26, and the plate covered about 6×8 . At 20 inches extension the focal length is $44\frac{1}{2}$ inches, the aperture F/44, and the plate covered 12×15 . These figures give a general idea of what a moderate-power telephoto lens will do.

The third class is usually of somewhat similar power to the Adon, as it commonly consists of a combination of a positive lens of any convenient focal length, with a negative lens of half its focal length, although for special work negative lenses having a focal length one-fourth that of the positive may be used. Such a combination is termed a high-power lens, as it gives a proportionately larger image with the same camera-extension. I am purposely avoiding the term "magnifications," as this I consider has led to misunderstanding in the past. The equivalent focal length at the time of exposure is the point of interest to the photographer who does not care whether it results from three magnifications as compared with one lens or six with another.

The manipulation of a telephoto lens is quite simple, and the only difference from the ordinary procedure is that focusing is best done by using the rack and pinion of the lens-attachment instead of that of the

camera. With a moderate-power attachment—that is to say, one-half the focal length of the positive—the equivalent focal length is twice the camera-extension—measured from the back surface of the negative lens—plus the focal length of a positive lens. Thus, when using an 8-inch rectilinear fitted with a 4-inch negative lens, we have at an extension of 16 inches an equivalent focal length of 40 inches, and so on for all other sizes. The focal length in this case being increased five-fold, the F/No. on the iris must be multiplied five times, so that F/8 temporarily becomes F/40. Having decided upon the camera-extension, all that is needed is to rack the sliding tube of the attachment in or out until a sharp image is obtained. This must be done very slowly, much in the same way as when using the coarse adjustment of a microscope, or there is danger of passing and repassing the point of sharp definition without knowing it. It might be imagined that with apertures of F/40 or less long exposures would be required, but these are greatly reduced by another factor, the distance between lens and subject, so that in many cases half or even a quarter the exposure indicated by a meter for an object, say, at 36 feet, would be sufficient.



JACK AND JILL

DR. J. B. PARDOE

THIRD PRIZE—DOMESTIC PETS

A color-screen usually adds considerably to the brilliancy of the result when distant views have to be dealt with, but it is not necessary for near subjects in which there is no perceptible haze over the deepest shadows.

Plates which give density readily are the best for this class of work, and I have found the "ordinary" and slow ortho plates preferable to extra rapid makes. The Imperial Special Rapid is about the fastest plate I should recommend.

Development usually takes longer than for close-up views. A full-strength developer should be used and development carried on until all action ceases. I have turned a plate face down supported by four bits of glass in the corners in a normal pyro-soda solution, containing a little bromide-solution to prevent chemical fog, and left it for forty-five minutes, the resulting negative being an excellent one.

The applications of the telephoto lens are many and varied, and cover a much wider field than is generally imagined. In ordinary view-work its value is obvious as its elasticity of focal length enables a subject to be made from the most advantageous standpoint upon any desired scale, so that the proper amount can be included upon any size of plate. For architectural details it is unrivaled, whether the result is a fine piece of carving for study or illustration, or a piece of faulty work, cracked or subsided for use in a legal action. When the London tubes were projected the houses under which the tunnels would pass were carefully surveyed and telephotographs taken of all existing cracks or distortions before commencing work. In quite another field of study, photographs of statues scores of feet above the ground were taken for the purpose of identifying them as the work of the same artist, mannerisms being clearly shown in the prints.

For catalog-work, especially of small articles which have to be depicted in their full size, or nearly so, the telephoto lens is again a winner. Let anyone compare a print of a snuff-box taken full size with, say, a 12-inch lens and a telephoto at 20 inches camera-extension. For flower-photography the telephoto is excellent, much greater depth of definition being obtainable, and some lenses add a slight softness to the outlines which gives a better idea of the texture than the dead sharp images usually obtained.

For portraiture its use is somewhat limited on account of the small working aperture of most models, but the Telecentric makes an excellent portrait-lens. Lenses upon the same principle are, I believe, to be placed upon the market by two other firms.

The foregoing is not in any way intended to give full working instructions, but rather to outline the properties and uses of the telephoto lens to those who have hitherto neglected it. Several excellent books have been issued on the subject, and these can be referred to for fuller information.

PRACTICUS, in *The British Journal*.



Spoiled Negatives

FIFTEEN or sixteen spoiled glass-negatives, put back into the box in which they were supplied, and wrapped up in newspaper to make them fit the box, form a very useful weight. The box itself may be neatly covered with bookbinder's cloth glued on. A few such weights are very serviceable when mounting prints. A piece of clean glass, glued to the bottom outside, gives a perfectly smooth surface, which is sometimes advantageous.

ARTHUR FORD, in *The Amateur Photographer*.



SUBJECT FOR NEXT COMPETITION ADVANCED WORKERS



Copyright, 1914, Kenneth Hartley

TIGER LILY



Copyright, 1914, Kenneth Hartley

SMALL-LEAVED SAXIFRAGE

KENNETH HARTLEY

Advanced Competition—Nature-Studies Closes March 31, 1920

PHOTOGRAPHY and Nature—what tremendous opportunities await the person who understands and loves them both! Whether a man uses a camera or a box of paints to express the art within him, he usually turns to nature for his truest and highest inspiration. In this competition the grandeur of snow-capped peaks is to give place to a more intimate, yet none the less beautiful, study of flowers, birds, animals and reptiles in their native habitats. Contestants are asked to pick out individual specimens and to portray these truthfully, artistically and in their native environment. The beautiful flower-studies by Kenneth Hartley on this page, illustrate convincingly what may be done by the intelligent camerist, although Mr. Hartley does not claim to have exhausted the artistic possibilities of his subjects. I advise every prospective entrant in this competition to read thoroughly the article, "The Wild Flowers of Pike's Peak," by Kenneth Hartley in June, 1915, PHOTO-ERA. It will be a source of much practical help and a splendid inspiration.

The reference to Mr. Hartley's beautiful article leads me to suggest that those who seek a prize in this competition will do well to re-read articles on nature-photography by Chester A. Reed, May, 1910; Edwin A. Roberts, May, 1916; Lehman Wendell, September, 1916; Guy A. Bailey, May, 1917; R. A. Buchanan, January, 1918; Bertran F. Hawley, September, 1918; Francis Hobart Herrick, April, 1919; William S. Davis, March, 1919; Beatrice B. Bell, November, 1919. Moreover, a careful study of the pictures made by these workers and by Fannie T. Cassidy, George Alexander, E. Louise Marillier, Katherine Bingham, H. R. Decker and others will be invaluable to the camerist who is really eager to obtain beautiful nature-studies.

The camera-and-lens equipment needed for nature-photography varies, obviously, for financial and technical reasons. However, costly paraphernalia is not required by the average worker unless he intends to photograph very small insects or animal-organisms. Many very beautiful and artistic nature-studies have been made with an ordinary roll-film box or folding-camera and a fifty-cent portrait-lens slipped over the lens on the camera. However, in nature-photography

—of whatever branch the camerist may select—it is of advantage to have a plate-camera with a double- or triple-extension bellows and a good anastigmat lens of a convertible type. With such an outfit, the worker is able to approach his subject conveniently and hence obtain pictures of scientific and artistic value. The ability to focus on the groundglass is a great help for accuracy in nature-photography is important. A reflecting-camera may be used successfully provided it have sufficient bellows-extension for the particular branch of nature-photography that the camerist may select. Again, let me emphasize the fact that it is not the camera but the person behind it who is mostly responsible for the failure or the success of nature, or any other kind of photography.

It will be remembered that in my article on the Still-Life Competition, I referred to the hackneyed themes of the overturned basket of fruit and the vase filled with flowers. In this competition there is a strong tendency toward flower-studies and nothing else. This is not due to flowers being any easier to photograph than a toad; but to a pre-conceived idea that a flower-study is the alpha and omega of nature-study photography. Really, to make a flower-study *out-of-doors*, as Mr. Hartley has done, is no mean achievement. Let those who doubt this statement make the attempt! Nevertheless, commendable as the pictures may be, there are still numberless subjects that are equally interesting and beautiful.

How many of my readers with camera in hand have strolled along the shores of a small lake and noted the hundreds of nature-subjects at every turn? A hillside is filled with possibilities. I remember well one afternoon that I devoted to the study of ants. It was in the Berkshire Hills of Massachusetts and I had struggled through some scrub-oak to reach an open spot on the hillside in order to obtain a view of the surrounding country when I came upon an ant-hill nearly three feet high. Of course, there was much scurrying about as the ants sensed the possibility of my stepping upon their home; but as I stood there without making any threatening movement, they regained their composure and resumed their routine labors. Gradually, I crept nearer until I reached a convenient stone upon which I placed my camera and soon was able to focus the lens within a few inches of the ant-hill. The result of my attempt was a very good "close-up" of a section of the ant-hill showing several ants struggling to carry a large dead beetle to a safe place for future dismemberment. It required over an hour to obtain this picture; but I can assure the reader that I enjoyed every moment of it.

On another occasion, I desired to obtain a picture of a wily, old woodchuck that inhabited a hole in a stone-wall. I concealed myself and camera in some bushes, about fifteen feet away and to windward in order that the woodchuck's acute sense of smell would not betray my presence. By removing the front combination of my convertible lens and focusing sharply on the hole, I was able to obtain a good record-picture of Mr. Woodchuck as he sat up preparatory to foraging for his evening-meal. In this case, I waited over two hours for the opportunity, although the opportune moment might have arrived much sooner. I had other interesting and profitable photographic experiences with chipmunks, rabbits, snakes, toads, turtles, insects and wild-flowers. Often, I suffered much physical discomfort from mosquitoes, flies, ants, and brambles—but the results were worth it.

However, when it came to photographing birds, I suffered many bitter disappointments. Time and again, my subjects proved to be fairly tame but they

would not sit on the particular twig upon which I had focused my camera or at the moment of exposure they would take flight. I had no equipment other than my camera and a long thread so that my results, such as they were, gave me much pleasure and satisfaction. (F. H. Herrick's method of photographing song-birds as described and beautifully illustrated in his book, "The Home-Life of Wild Birds," is the best ever devised. The book is out of print, but several copies may be had of PHOTO-ERA.)

It is not my purpose to mention these incidents because of any technical or artistic interest they may possess but to use them merely to encourage the camerist to avail himself of similar opportunities. Moreover, the winter-season is filled with almost as many possibilities as the summer-season, and those who live in the northern part of the United States and Canada, need not despair of attractive material.

Individual camerists vary in temperament, and for this reason may not take much interest in toads, turtles, snakes, beetles and kindred animal-life. Nevertheless, a study of the interesting articles by Lehman Wendell—especially the one, "Nature-Studies With a Camera," in October, 1919, PHOTO-ERA—will help to overcome this aversion to "creeping and crawling things." Another excellent article is the one by Beatrice B. Bell, "Cobweb-Photography," in November, 1919, PHOTO-ERA. There are virtually few opportunities to photograph fish, unless the camerist is fortunate enough to photograph one as it leaps out of the water after a passing fly. The important point is to be ever on the alert and equipped, so as to lose no time to get into action.

Although I have mentioned briefly the technical equipment that is suited to the making of nature-studies, I have said nothing of need of the artistic and mental preparation required. In my article, "Voices of Nature and the Camera," page 150, of March, 1919, PHOTO-ERA, I called attention to the experience of a young lady who had "eyes but she saw not, and ears but she heard not" during a visit she paid my family while we were in a beautiful spot in the Berkshire Hills. How her love of nature was aroused and what it meant to her for years afterward, illustrates my point that to photograph Nature we must love her. By that, I do not mean a superficial love that finds expression in trite remarks such as "isn't that a *grand* flower"; "what a *pretty* mountain"; "look at that *funny* bird"; "my, what a *gorgeous* toadstool" and similar remarks. To love nature, as the true artist of the brush or camera should love her, is to "find tongues in trees, books in the running brooks, sermons in stones and good in everything."

In this love of nature must be included a feeling of kinship with our furred and feathered friends. They must be made to feel the warmth and genuineness of that love. Men like Thoreau, Burroughs, Muir and Van Dyke may be said to love nature deeply, and for that reason they were able to bring to thousands a realization of the beauties of field and forest and the life within them. It has been said, that nature never disappoints those who turn to her, and I know this to be true.

Let the camerists who seek to receive a high position in this competition, take into consideration the mental, technical and artistic factors involved and strive to portray with the camera that which may bring a ray of sunshine into the lives of those about them. A sentimental view of the matter, you say? Granted; but, after all, is not that which comes from the heart the highest and truest expression in music, literature, art or photography? A. H. B.



BEGINNERS' COMPETITION



Closing the last day of every month
Address all prints to PHOTO-ERA, Beginners' Competition
367 Boylston Street, Boston, Mass., U. S. A.

Prizes

First Prize: Value, \$2.50.

Second Prize: Value, \$1.50.

Honorable Mention: Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.



Subject for each contest is "*Miscellaneous*"; but original themes are preferred.

Prizes, chosen by the winner, will be awarded in photographic materials, sold by any dealer or manufacturer who advertises in PHOTO-ERA, or in books.

Rules

1. This competition is open only to beginners of not more than **two** years' practical camera-activity, and whose work submitted here, is **without any practical help from friend or professional expert**. A signed statement to this effect should accompany the data.

2. Workers are eligible so long as they have not won a first prize in this competition. Winners of the first prize automatically drop out permanently, but may enter prints in the Advanced Class at any time.

3. Prints eligible are contact-prints from $2\frac{1}{4} \times 3\frac{3}{4}$ to and including $3\frac{1}{4} \times 5\frac{1}{2}$ inches, and enlargements up to and including 8×10 inches.

4. Prints representing **no more than two different subjects**, for any one competition, and printed in any medium except blue-print, may be entered. They should be simply and tastefully mounted. **Subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era awards are announced.** Prints on rough or linen-finish surface paper are not suitable for reproduction, and should be accompanied by smooth prints on P.O.P., or developing-paper having the same gradations and detail.

5. **Unsuccessful prints will be returned only when return-postage at the rate of one cent for each two ounces or fraction is sent with the data. Criticism on request.**

6. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. However, he may dispose of other prints from such negatives after he shall have received official recognition.

7. Each print entered must bear the maker's name, address, instructions, the title of the picture and the name and month of the competition, and should be accompanied by a letter, SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type, and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks will be sent upon request. **Be sure to state on the back of every print for what contest it is intended.**

8. Competitors are requested not to send prints whose mounts exceed about 11×14 inches, unless they are packed with double thicknesses of **stiff** corrugated board—not the flexible kind, or with thin wood-vener. Large packages may be sent by express.

Awards—Beginners' Competition Closed November 30, 1919

First Prize: Henry A. Pratt.

Second Prize: G. A. Smith.

Art and the Beginner

For some unaccountable reason, many a beginner who is eager to excel in photography, attempts to master art-principles before he has acquired technical proficiency or even a working-knowledge of his camera. He seems to have an idea that to know the relative values of light and shade is of greater advantage than an accurate knowledge of the F-values of his lens. In a measure, this unfortunate state of affairs may be traced to photographic magazines, camera-clubs and individual advanced camerists who are continually urging the need of artistic photographic expression. This is all very well and serves a worthy purpose, but the beginner should defer the artistic utterance of his soul until such time as he can photograph the back fence without over or underexposing the plate.

In my article, "The Photographic Awakening," page 204 of April, 1919, PHOTO-ERA, I referred to my own experience with art during my photographic neophyte-days. Among other things I said, "My own two-days are still fresh in my mind, and I remember well my second photographic season. During the previous year I had done fairly well with my little Brownie, and in April of my second year I determined to improve my outfit and, likewise, myself. To this end, I purchased a folding hand-camera fitted with a good rapid rectilinear lens. 'Surely,' I reasoned to myself, 'this new outfit will enable me to make rapid progress during this coming summer. Last year I learned how to develop and print my own pictures; this year I can devote to the study of composition, light and shade and the artistic work of other photographers. In short, during my first season I mastered my camera and technical photography; now all that I need to do is to devote a season to the artistic principles involved and I shall be master of the entire subject.'"

"To make a long story short, the time I expected to devote to the study of art-principles was given exclusively to the attempt to become proficient in the fine art of focusing! That second summer, I arrived in the country imbued with art; I lived, moved and had my being in the rarefied air of a genius about to bring a waiting world to his feet; but to save my life I could not produce a picture that was correctly focused. Finally I came back to earth. Art was all very well in its place; but it had no abiding-place with me the rest of that summer. Although a world still waits to be brought to my feet by my artistry I can focus a camera as well as any man!"

My object in recalling this salutary experience is not to swerve the ambitious beginner from a laudable desire to advance artistically as quickly as he does technically. However, I am sure that a moment's reflection will cause the beginner to appreciate the force of my appeal to master his photo-equipment before he attempts an incursion into the embattled Realm



PIKE'S PEAK

HENRY A. PRATT

FIRST PRIZE—BEGINNERS' COMPETITION

of Art. Say what you will, it is a battle—a conflict of many schools of artistic expression. Every contestant has a right to be heard and, likewise, each one has a right to express his opinion. The artist of brush or camera who can win the approbation of the majority is usually acknowledged "to have arrived." He who but gains the ear of the minority must retreat in good order and prepare for another assault at a later day. In both cases, technical mastery of equipment is assumed to be the starting-point. It does not and cannot have any bearing on the ultimate result, artistically, as far as the average jury of award is concerned. In short, the contestant is expected to be able to make a good negative and from it a good print. If this technically good print requires trimming, retouching or other manipulation to make it *artistically* satisfactory—that is another matter and does not involve a question of technical ability.

In the foregoing paragraphs I have endeavored to set beginners and amateur photographers of one or two years' experience to thinking seriously about their technical picture-making. If I have stirred them up to a realization of the responsibility that they shoulder to make good for their own sake and that of photography, I feel sure that in time they will agree with me. To-day photography is too much of a science and an art to be treated lightly; and the sooner that beginners, amateurs and professional photographers face this fact, the sooner will every one of them get more out of it. Those of us who try to keep in touch with photographic progress throughout the world are more than ever convinced that photography is worthy of our deepest respect and our best in thought and deed. In photography—as in many other human activities—thorough ground-work in fundamentals ensures ultimate success. The remark attributed to Edison is

true, "success is ten per cent inspiration and ninety per cent perspiration!"

The first step toward the study of art-principles is to make a good print. The second, is to produce a picture with an appeal because of its sincerity and lack of "striving-for-an-effect." When a beginner can do these two things well, it is time enough for him to attempt the mastery of light, shade, line, mass, nuance and atmosphere.

After all is said and done, one person's opinion is as good as another's in art-appreciation provided that such a person has a sound knowledge of the rudiments of art. Because I do not like a picture, is no reason why it should be condemned. Either my criticism is justified because of a flagrant violation of the first principles of art or the composition is beyond my artistic ability to understand. As I have said in another article, "Because a thing is new and not espoused by the crowd, it does not follow that it is wrong or that it should be subjected to ridicule. There is one thing of which we can be sure, and that is that true merit wins a place in the sun despite every obstacle. If the advanced workers are on the right track, criticism of whatever nature will but spur them on to greater efforts, and those of us who feel that we must see to believe, will be shown conclusively that 'we have eyes but see not.'"

The beginner who has mastered his camera and who can devote his attention to art without being hampered by the friction of imperfect technique, is ready to step forward. Then, he will realize that his days, weeks or months of monotonous "practicing" will enable him to delight his "audience" with the sincerity, beauty and harmony of his pictorial compositions. Is this not worth-while?

A. H. B.



THE BRONX RIVER

G. A. SMITH

SECOND PRIZE—BEGINNERS' COMPETITION

Tentative Development

BEFORE it was discovered that several negatives could be correctly developed together in a tank, photographers developed their negatives, usually singly, in a tray, says *Kodakery*. A common practice was to judge by the appearance of the image in the early stages of development whether the exposure the film or plate had received was correct or incorrect, and if, in the opinion of the photographer, the exposure was not correct, changes were made in the developer as soon as the exposure-error was discovered. These changes were made in the belief that the developer could counteract the effects of underexposure or overexposure. This was a tentative or experimental method of development.

Viewed in the light of modern knowledge, tentative development is a profitless procedure, not only because it is wasteful of time and chemicals, but chiefly because the theory on which the method is based has been proved erroneous.

A negative is made by exposing a film or plate in a camera and then developing it. In discussing tentative development we have, therefore, but two things to consider—exposure and development.

The record the light makes on a film or plate is determined solely by the exposure. How much or how little of the light-record the finished negative contains is determined solely by development. The developer makes the latent image visible. Where the light has not acted there can be no image. Trying to coax out an image which is not latent in the film is a hopeless procedure, and the theory that by diluting the developer, or by adding carbonate to the developer, in tentative development, more detail can be developed than by any other method, is erroneous.

The companion theory, that bromide of potash will

increase contrast in an overexposed negative if it is added to the developer after the negative has been developed far enough to show that it really was overexposed, is likewise erroneous. The image in an overexposed negative flashes up so quickly in tentative development that the shadow detail usually becomes visible before one can discover that the negative was overexposed. If bromide is added to the developer after this shadow-detail has become visible it will slow the development but will have very little, if any, influence on the contrast of the negative. In order to increase the contrast the bromide must be added to the developer *before* the shadow-detail is visible.

Since tentative development neither enables us to add detail to underexposed negatives nor contrast to overexposed negatives it offers no practical advantages whatever. By far the best method of developing negatives is to develop them for a given time, with a developer of a given strength, at a given temperature. This is the method employed in tank-development. It is equally suitable for tray-development, though in tray-development it is advisable to use only one-third as much water in making up the developer and to develop for only one-third the length of time recommended for tank-development. When this method is applied to tray-development the difficulty in deciding when to stop development is eliminated.

Strange as it may seem, when correctly exposed, underexposed and overexposed films are all developed together, for the same length of time in a tank, in accordance with the instructions that are furnished, they will all make good prints, unless the incorrectly exposed ones were hopelessly underexposed or overexposed. From hopelessly bad exposures it is manifestly impossible to obtain good negatives by any known method of development.



THE CRUCIBLE

A MONTHLY DIGEST OF PHOTO-TECHNICAL FACTS

Edited by A. H. BEARDSLEY



A Call for Practical Articles

THE editor of this department believes that there are many readers of PHOTO-ERA who will be glad to co-operate with him to make *The Crucible* an eminently helpful department and to widen its scope. To this end, we will offer each month a three-month subscription to any reader who contributes the most practical and helpful article of not more than three hundred words. We are specially desirous to receive items that are new, technical and of scientific value. The present discussion of the reversal of the photographic image is an example of the sort of material that will be welcomed. Contributions, other than the winning article, that possess sufficient merit will be published with full credit to the author. It is not necessary that contributions be of special literary merit, as the editor will edit—when necessary—all material submitted to this department. Although items of technical interest are desired, we do not desire articles that involve highly scientific chemical and technical formulae or to discuss subjects in language that is incomprehensible to the average amateur or professional photographer. In short, it is the editor's aim to make this department *unusually* interesting and to avoid "dry-as-dust" articles that would interest only the trained chemist or physicist. The hearty co-operation of every reader of PHOTO-ERA is asked in order that we may make this department of exceptional practical value and interest at the very outset.

Reversal of Image in Dish-Development

WITH regard to this question, a worker records his experience in a recent issue of *The British Journal*. One night, he was developing a roll of films (Kodak) with Certinal developer, and white light struck one end of the film. After the film was fixed, he noticed that the two end-exposures were positives. He wondered why. He developed another Kodak film in the same developer and towards the end of development allowed light to play on film for about a minute, still passing through the developer. Result—all positives. The exposures were all outdoor ones.

He had reversal of the image on one or two occasions where no light had penetrated, but only within the last six months. He thinks that it may be the emulsion used is different from that of last year, perhaps some improved method of Kodak's or possibly may be due to developer.

Practical Suggestions

The following paragraphs contain much of practical value and are reprinted from *Studio-Light*, the up-to-the-minute professional photographers' house-organ issued by the Eastman Kodak Company.

If your negatives have a slight veil of fog, look for the trouble in your lens. A dusty lens will give a scatter of light that will cause a general fog that is very destructive to negative-quality.

If your lens is perfectly clean look for bright pieces of metal or wood inside the camera and go over these with a dead-black paint. There must be no glossy

surfaces inside the camera, no matter how black they may be.

When the fog extends over the margins of the negative that are protected by the rabbets of the plate or film-holders it is evident that the fog is not a fault of camera or holders. The trouble must then be looked for in the darkroom. Our method of determining whether or not any outside light reaches the film or plate while it is developing is very ingenious. Place a mirror in the position occupied by the developing-tray and with all lights extinguished examine the mirror for any reflection of light. It may be that light from outside reaches the developing-tray from a source which cannot be seen except from the position of the developing-tray. If this is the case such light will be seen in the mirror.

If the darkroom-light is unsafe, the passage of actinic rays can be detected by placing an unexposed plate in the tray in total darkness, laying one or two coins on it at the same time. If the darkroom-light is turned on and the developer applied, the presence of fog should be detected in five or six minutes by the production of outlines of the coins when they are removed.

Tests for the safety of a darkroom should always be made at the distance from the light at which the developing-tray is used. A light may be safe for developing at a distance of four feet and altogether unsafe at two feet. In fact there is no light that is perfectly safe for an indefinite time. For this reason the safest light-filters, Wrattan Safelights, have been given a standard of safety which permits of a plate being developed at three feet from the light.

Formulae for Reducers

THE subject of reduction is always of interest and a contributor to *Kodakery* offers several excellent suggestions and formulae.

Farmer's reducer has probably been more extensively used than any other, as it was introduced long before the others were known. The writer, however, prefers the action of permanganate to that of red prussiate used in Farmer's reducer because very few negatives can be improved by reduction unless they were overdeveloped, and, if they were overdeveloped with pyro they usually have a pyro-stain. Permanganate removes this stain and thus makes less reduction necessary. Farmer's reducer does not remove pyro-stain, so that its action is only of benefit in the removing of silver.

The permanganate-reducer is especially convenient for the amateur who does not care to weigh out and mix the separate chemicals. This reducer can be obtained, in small glass-tubes, from dealers, but the others must be made up by the photographer himself.

Negatives that are to be reduced should be placed in water for about twenty minutes before they are immersed in any reducing-solution.

The tray in which a negative is being reduced should be rocked gently to ensure uniform action of the reducer.

No reducer that is mixed, ready for use, will keep in good working-condition for any length of time.

and after it has been once used it should be discarded. It is economy to use a fresh solution for each negative.

If a negative is still too dense, after it has been reduced, the process of reduction can be repeated. All the chemicals must, of course, be washed out of the negative before the second reduction is undertaken.

The hands should always be washed after using reducers as some of the chemicals of which they are composed are poisonous.

Avoirdupois weight is used in the following formulæ:

FARMER'S REDUCER

For removing an equal amount of silver from all parts of a negative.

Water	4 ounces
Hyposulphite of Soda	1 ounce

After the Hypo has been dissolved add just enough Red Prussiate of Potash to make the solution a lemon-yellow color.

The negative must be washed thoroughly after it has been reduced.

PERMANGANATE REDUCER

For removing a little more silver from the dense than from the thin parts of a negative.

SOLUTION A

Water.....	1 ounce
Potassium Permanganate.....	24 grains

SOLUTION B

Water.....	1 ounce
Sulphuric Acid, C. P.....	24 minims or drops

Take 1 dram A, 2 drams B, and 8 ounces water. When the negative has been sufficiently reduced immerse it in a fresh acid fixing-bath and leave it there for a few minutes after all the color which the reducer may have imparted to the negative has disappeared. Then wash the negative thoroughly.

PERSULPHATE REDUCER

For removing much more silver from the dense than from the thin parts of a negative.

Water.....	4 ounces
Persulphate of Ammonia.....	$\frac{3}{8}$ ounce
Sulphuric Acid, C. P.....	20 minims or drops

The speed with which this reducer acts increases as reduction proceeds. The appearance of a trace of milkiness, when a negative is being reduced, indicates that reduction is speeding up. At this stage the negative must be closely watched, and it should be taken out of the reducer just *before* enough silver has been removed, quickly rinsed and *immediately* immersed in a fresh acid fixing-bath, where it should be left for a few minutes, and then thoroughly washed. The importance of thorough washing cannot be emphasized too strongly.

Just when to stop the reduction can only be learned from experience, and those who have had no experience with this reducer should experiment with negatives that are of no value before attempting to reduce one that is valuable.

A negative that has been reduced too much with persulphate is too flat, because the contrast has been removed and it cannot be replaced by any method known.

PROPORTIONAL REDUCER

For removing silver from a negative in proportion to its density. For instance, if 25% is removed from the

highlights, 25% will be removed from the halftones, and 25% from the shadows.

SOLUTION A

Water.....	16 ounces
Potassium Permanganate.....	2 grains
10% Solution of Sulphuric Acid, C. P.....	$\frac{1}{4}$ ounce

SOLUTION B

Water.....	32 ounces
Persulphate of Ammonia.....	1 ounce

Take 1 part A and 3 parts B. This will usually reduce the negative sufficiently in 3 minutes' time. After the negative has been reduced it must be rinsed and then given a 5-minute immersion in a 1% solution of Metabisulphite of Potash, or Bisulphite of Soda, after which it must be thoroughly washed.

Local Toning of Bromides

MOST people are aware that self-toning collodion-papers can be toned locally to a cool grayish tint by painting the parts which are intended to be of this color with a strong solution of common salt before immersing the print in the usual fixing-solution, states the *British Journal*. But it has perhaps not suggested itself to many that it is easy to do the same thing with bromide prints, the only difference being that the brush-work is done upon the parts which are to be of a sepia tone, the image as developed furnishing the grays. All that has to be done is to apply the ordinary bleaching-solution of ferricyanide and bromide to such parts that are to be toned, taking care to keep accurately to the outlines. After washing, which should be done with a copious supply from a rose, immerse in the sulphide-solution as usual. If by an accident the bleacher has gone beyond the proper limits, the black color can be restored by careful application of an amido developer with a clean brush, and rinsing well before sulphiding. The process may not have any great value from an artistic point of view, but there are occasions on which it may be useful to be able to differentiate between different parts of a print by means of color.

Lens-Caps

NOWADAYS, exposures made with the lens-cap are by no means so common as they were years ago, remarks *The British Journal*, and frequently we find expensive lenses devoid of these fittings. But, quite apart from their use as a means of exposing plates, a well-made cap should be regarded as inseparable from a good lens when the instrument is not in use, even if attached to the camera; whereas, if it is usually taken off and stored separately, a cap should be fitted over each end as a protective measure. In this respect the modern shallow hood of the anastigmat lens seems to demand the protection afforded by the cap far more than did its predecessors of thirty years ago, when the hood of the instrument allowed the glasses to be set far back. Speaking of lens-caps reminds us that many of the present-day photographers cannot make an exposure with the cap without running a serious risk of blurring the negative through shaking of the camera. Some time ago we saw a photographer, whose roller-blind shutter had failed him, take off his lens-cap to make an exposure with a sudden wrenching motion. The correct way is to remove the cap with a gentle circular screwing-off action, lifting it in an upward direction, and thus to some extent equalizing the exposure of sky and foreground if the subject is a landscape. The knack is well worth cultivating.



ANSWERS TO QUERIES



F. C. K.—Optical glass is affected to a greater or lesser degree by light and atmospheric conditions. Some glasses are more sensitive than others. As a rule, the anastigmat lenses are apt to be affected more than cheaper lenses because high-grade lenses receive a higher polish. It must be remembered that highly polished optical glass closely resembles highly polished steel in that light and moisture cause corrosion. In some cases, lenses that are protected carefully never show discoloration or other defects—even after years of service. The photographer should see to it that his lens is always capped or otherwise protected from light and moisture when it is not in use. You should never leave a camera and its lens exposed to direct sunlight, for by so doing you may not only fog the unexposed plates or films, but cause serious damage to the lens.

W. O. C.—There are three general types of lens-construction mentioned in lens-catalogs. An unsymmetrical lens is one whose front or back combination, usually, may not be used alone. A symmetrical lens is one which permits the use alone of either front or back combination. As a rule, both are of the same focus. A convertible lens is one in which the front combination is of a different focus from that of the back combination—thus giving three focal lengths in the same lens. To illustrate: an unsymmetrical lens might be of 6-inch focus only; a symmetrical lens of 6-inch and 12-inch focus; and a convertible lens of 6-inch, 9-inch and 14-inch focus.

J. S. R.—With regard to a Bausch & Lomb Plagimat F/6.8 lens as compared to the newer low-priced F/7.5 lens, we beg to state that if you intend to confine your photographic work within the scope of an ordinary roll-film camera, and do not intend to use the lens to copy, enlarge, do telephoto or wide-angle work, we believe that the lower-priced F/7.5 lens will meet your requirements efficiently.

On the other hand, if you intend to do several kinds of photographic work with a long bellows-extension, rising-and-falling front and other attachments for serious photography, we believe the B. & L. Plagimat will serve you to better advantage. The F/7.5 lenses are specially made for use on roll-film cameras and for that purpose they are in most respects equivalent to the high-priced lenses; but should you use one of these lenses on a different equipment, such as a high-grade long-extension plate-camera, the lenses would not cover satisfactorily, nor would they serve you as well.

M. K. W.—It is not necessary to cut apart roll-film negatives to dry. It is customary to keep the negatives in the strip until developing, fixing, washing and drying are finished, then each negative is cut off ready to print. Some prefer to cut the exposures in order to develop each negative by itself. However, this is of no particular advantage unless the various exposures are of such a nature as to require individual attention. The modern developing-tank and the correct amount of developer will usually take care of all ordinary variations of exposure.

S. D. O.—Whether or not the use of F/3.5 anastigmat lenses is to be advised generally is a debated question. The great speed of the lens permits exposures to be made under conditions

which would render slower lenses useless. On the other hand, how many times does the average amateur-photographer attempt to make pictures under conditions which an F/6.3 or F/4.5 lens would not take care of efficiently? When all is said and done, the advisability of using an F/3.5 lens is a question to be decided by the individual. An important factor in the decision should be the ability of the amateur to use such a lens successfully.

W. K. B.—A shutter-speed of 1/300 of a second will stop all ordinary moving objects. Without a doubt the focal-plane shutter is the most efficient for high-speed photography. However, successful diving, running, baseball, football and airplane pictures have been made with a between-the-lens shutter working at a maximum speed of 1/300 of a second. In making speed-pictures with a between-the-lens shutter the photographer should select his angle of view carefully, so as to avoid having the subject pass the camera at right angles.

C. K. O.—Most shutters may vary in speed if turned on their sides or inverted. This possibility should not be overlooked, particularly when engaged in making important pictures. The variation may not be very great, and probably in most cases the camerist would experience no trouble. If roller-blind or focal-plane shutters are being used it is well to make sure that the tension-spring has been tightened sufficiently to close the shutter—no matter in what position it may be held.

J. H.—Development of negatives by the glass-positive methods. Make your glass-positive by contact, as you would a lantern-slide or window-transparency, and from that make as many negatives as you wish. If you wish to make enlarged negatives, first make an enlarged positive in the enlarging camera by any of the light-sources that are popular and effective. Many professionals make these enlarged positives by direct daylight—a very simple matter—and from these enlarged positives make contact negatives.

J. S.—Drying unwashed negatives and prints after fixing is not to be recommended, unless this is done in a darkened room. Without going deeply into the chemistry of the matter, we should say that plates or prints that have been fixed but have not been properly washed should not be exposed to bright light to dry and, after a lapse of many hours, thoroughly washed in the hope of removing every trace of hypo.

The way is to proceed as advised and then to wash them for many hours, as long as they need ordinary light.

Our suggestion would be to dry them in a darkened room and afterwards wash them thoroughly in ordinary light; because hypo, remaining in the film, will be acted upon by bright light and affect the print or negative, more or less.

F. J. K.—We regret not to know of what Hypono is composed, but it is undoubtedly one of the Peroxides, although not H_2O_2 . It has no bad effect on the film, except when used too strong with soft water when it has a tendency to soften the film. This is remedied by using it at half strength. However, the average user will find that Hypono may be used successfully by following the directions explicitly.



OUR CONTRIBUTING CRITICS



YOUR CRITICISM IS INVITED

Whoever sends the best criticism (not over 150 words) before the twentieth of the current month, will receive from us a six-month subscription to PHOTO-ERA MAGAZINE.

The winning criticism, in our opinion, is the first one printed below.

I GET a "keyed-up" sensation when I look at this print for fear that the woman will fall off the porch backwards. The face before the post is good, as the eye enters at the bottom, inspects the baby, goes up the vertical lines of the post, and on to the woman's face, down her body, and back up through the baby again, confining the interest. The print appears to be out of focus. Whether or not *maama* is saying "Naughty, put it back!" or "Baby wanta apple?" is a mystery to me. The dark house on the right is distracting; the repetition of verticals at the left is very bad, and the child's face in front of the edge of the banister is also bad. This print would have been much better with more contrast, made in the sun. The shading is good, and the lighting on the woman's face is good. The print contains a good idea, but it could have been carried out to better advantage.

FREDERICK C. DAVIS.

THE tones in this picture are the most beautiful I have seen in a very long time. The exposure being ample, it laid the foundation for expert handling in development and printing, and the result is a striking example of harmony of rare quality. The post, as it appears in relation to the lady's face, although perhaps, not a fault, is, in my judgment a slight imperfection, which, however, could not have been avoided. Besides, the unusual excellence of the picture can well carry that small burden, as well as the slight lack of satisfying definition in the child's face. The originality of the conception merits high praise.

LYNDSEY BOURKE.

I AM tempted to speak of this picture as it would seem to a person of ordinary art-appreciation who knows nothing about the shortcomings—or longcomings—of photographic lenses. Admitting the high price of leather, why stress it in art? The lady's shoes and her bag are well made, but what is the object of the picture—to show shoes to advantage? The child probably has eyes; but the photograph gives only the vaguest suggestion of those important appendages of



THE PICTURE CRITICIZED THIS MONTH

the human face. Her slippers are clear and distinct, but her countenance—*mais, que voulez-vous?* The atmospheric conditions must have been peculiar and I doubt if many such phenomena have ever been seen by meteorologists: A fog on a clear day that blurs objects not more than twenty-five feet away. The angularity of the chief lines is displeasing: pillars, railing, sidewalk, angle of arms, sharpness of the woman's face. Undoubtedly a pleasing memento for the family album; but as a work of art, to my mind, it is not as successful. I suggest that another attempt be made.

E. L. C. MORSE.

IN the photograph presented for criticism this month, attention is directed strongly to the diverging lines of the porch-railing and pillars, taking the interest away from the subject of the picture. The child's pose is good, but would be better if turned slightly to show a little more of the face, also a position or pose should be chosen showing the child with more than one arm. The woman's pose seems somewhat stiff, especially the right arm which is too much in silhouette against a light background. The curves in the lower part of the front of the dress give an awkward suggestion to the pose. The technical work is good with interest tending to center on the child. The subject is interesting and excellent in conception and arrangement.

JOHN C. CLEMENT.

This picture has a look that I have learned to know in photographs made in the shade when the sun is low. It may not be underexposure; but without longer exposure and vigorous development such pictures are apt to lack snap on account of the dull light. Unless the composition is particularly fortunate, such groups look better with a generous amount of picture-space around the figures; it gives a miniature-effect with improved depth of focus which this picture needs. The focus should be placed nearer the foreground.

The lady's head would bump the top of the picture if she stood up and it is placed awkwardly in reference to the pillar. The white line along her profile should be subdued. Omission of the black purse would allow the hand more freedom and concentrate interest on the rival black of the basket. The child's expression is not particularly happy.

WINN W. DAVIDSON.

"THANK YOU" for a most delightful bit of home-portraiture, a picture to look at and admire long before criticising. As this is to be a criticism, would it be too much to suggest that if the basket were lightened in tone it would not break the light-to-dark gradation across the picture of the foreground as contrasted to the dark-to-light gradation of the background? The data state that the picture was trimmed. It might have been better to leave a little more sky and further emphasize the diminutiveness of the child.

E. R. MORTON.



OUR ILLUSTRATIONS

WILFRED A. FRENCH



In contemplating a portrait of George Washington, the true American generally is satisfied when he acknowledges him as the genius of the War of American Independence and as the Father of his Country. On every February the twenty-second, the orator extols the virtues of George Washington as the soldier, the statesman and the administrator, and holds him up to the youth of America as an example worthy to be followed. But this is not enough. We are facing a situation to-day, that calls for the manifestation of pure, exalted patriotism, the exercise and protection of American rights and privileges, and the preservation and enactment of the Constitution of the United States. This is the sort of Americanism for which George Washington fought so courageously and so bravely until the surrender of Cornwallis, at Yorktown, which terminated the Revolutionary War. He was for his country first, last and always—fearless, highminded and incorruptible; and no president is fit to be mentioned in comparison who has forgotten his solemn pledge to respect and obey the Constitution and to protect the rights of every American in whatever part of the world he may be.

When, therefore, we celebrate Washington's birthday, in 1920, let us not only pay tribute to those qualities of heart and mind that earned for him the title "The Father of his Country," but select for our next standard-bearer, and chief executive of this great nation, a man who has proved by his acts in public and private life that he is worthy the high office filled by so loyal a patriot as George Washington.

Data to picture on the front cover: Copy of Gilbert Stuart's Washington, made fifty-three years ago by Josiah Johnson Hawes and first used as a frontispiece in February, 1906, PHOTO-ERA. "As an example of the durability of the photographic print it is of priceless value to photographers and as a sample of the permanence of the early photographic processes it would be hard to excel. Rivaling even the carbon-process, the tones and color-values of this wonderful silver-print, after the lapse of half a century, are in as excellent a state of preservation as on the day it was made."

The frontispiece is an admirable figure-study—a little boy simulating a rural character. "The Farmer's Boy" invites admiration by reason of the exceptionally successful technique. The pose assumes the pyramidal form of composition with commendable fluency of line, and the color-values and scale of gradations are so good throughout, as to call for special praise. I have always advocated the preference of models whose costume offered opportunities for harmony in composition. If, in the completed print, a light-colored or white costume, or part of a costume, were desired, then the model should wear one of a shade to produce the lighter effect. Of course, with the use of color-sensitive plates, such precautions are not necessary; but, using ordinary plates, the worker will find it difficult to avoid the excessive contrast which spells disaster to the composition of any picture. With discriminating judgment the artist provided her model with a smock of a grayish blue, and, with proper care in lighting, exposure and development, she succeeded in producing a picture of rare beauty and excellence.

Data: Dublin, N.H.; August, morning; Century

5 x 7; lens wide open; 1/5 second; plate; Eastman M. Q.; special Velvet Velox.

"In Dread December," page 60, Mr. G. H. Seelig introduces a meadow-stream under the influence of ice and snow whose irregular course the eye follows with interest from its entrance in the immediate foreground to its exit in the extreme distance. The atmospheric perspective enhances very materially the beauty of the picture.

Data: December, 10 A.M.; cloudy; Ica Reflex 3¼ x 4¼; 7½-inch Struss Pictorial Lens; stop, F/4.3; 3-time ray-filter; 1/30 second; Cramer D. C. Inst. Iso; enlarged on P. M. C. No. 3.

The winsome picture, "Pensive," page 61, appeals to us by reason of the attitude, expression and appropriately delicate lighting of the gentle, willing subject. The blond hair of the child and the folds of the dress have been rendered with felicitous skill.

Data: April, 11 A.M.; in studio; bright light; 8 x 10 Studio camera; 14½-inch Wollensak Verito; ½ second; Standard Polychrome; pyro, diluted; Artura Iris. This picture won Wollensak Trophy 19th Annual Convention of P. A. of N. E.

The illustrations of Edward Lee Harrison's concluding essay on architectural photography fulfil their mission admirably, as will be noted by those who read the text.

Data: "Utility and Comfort"; page 62; September, 4 P.M.; 3A Graflex; 7-inch Series II Wollensak Velostigmat; stop, F/11; 1/35 second. "Residence Boulevard"; page 63; August, 10 A.M.; sunlight; same camera and lens; stop, F/6.3; 3-time ray-filter; 1/20 second. "Green Gables"; page 63; August, 10 A.M.; morning sun; same camera and lens; stop, F/11; 1/25 second. "English Design"; page 64; February, 3 P.M.; sunlight; same camera; 7-inch Series I Wollensak Velostigmat; stop, F/8; 1/25 second.

As studied and photographed by James Allan, a receding mass of snow-capped piles, page 66, forms an unusual and grateful subject for pictorial interpretation. Much artistic skill has been shown in starting the line of these mysteriously shaped objects and carrying the eye to a point in the distant horizon.

Data: January, 1 P.M.; bright light; 4 x 5 Reflex camera; 7-inch Goerz Celor; stop, U. S. 2.9; 3-time ray-filter; 1/25 second; Standard Orthonon; pyro in tray; Cyko Plat.

During the past year, the Y. M. C. U. Camera Club, of Boston, has added to its constantly increasing membership several eminent pictorialists including W. J. Jaycock, whose specialty is marines. He makes seabirds a kindred subject; and in this connection is shown, on page 67, a remarkably beautiful picture of a seagull against an unobtrusive sky. The bird is very beautifully modeled and is admirably spaced in the picture.

Data: Frenchman's Bay, Maine; August, 3 P.M.; diffused light; 4 x 5 Graphic; 7-inch Ica Zeiss Tessar; F/8; 1/400 second; Cramer Isonon Portrait; Wellington Bromide.

The practice of simplicity in composition—the desirability of brevity of pictorial material—advocated almost constantly in this department, has borne fruit. Its value in the art of picture-making is appreciated by many ambitious workers, including W. H. C. Pillsbury, whose application of this principle is shown in "For-

saken," page 69. Here one cannot fail to observe the imaginative quality of a picture in which the human element is entirely absent. Covered with snow, the commodious bench is unable to extend hospitality to the weary pedestrian or the sentimental couple; nor is the spacious path as inviting as it was before it received its present snowy raiment. Mr. Pillsbury displayed true artistic discernment when he chose this theme for pictorial expression. In the succeeding technical operations, he has shown the necessary ability to preserve the spirit of the original scene.

Data: March, 3.30 P.M.; light snowstorm; $3\frac{1}{4} \times 4\frac{1}{4}$ Rexo Special; 5-inch Goerz Dagor; stop, F/16; $\frac{1}{5}$ second; Eastman Speed Film; Rytol; Soft Cyko.

Among the most attractive Honorable Mentions in the "Domestic Pets" competition, which closed October 31, 1919, is "Feeding Bobby," by Ross W. Baker, page 70. Bobby's friend is well-placed, and, but for the strongly lighted window-frame at the left of the window, would continue the line of the horse's head, without a break—a rather unique idea in pictorial composition. Local reduction in the negative will remedy this slight defect and a resulting print will show marked improvement. The many horizontal lines, which ordinarily mar a setting of this character, are not very obtrusive in Mr. Baker's picture; indeed, their presence is moderated by the lady's dress where they are repeated in a more marked degree, and yet, in ordinary circumstances, the design of the costume might act as an incongruous feature.

Data: October, 9.45 A.M.; hazy; Graflex 5×7 ; 12-inch Goerz Dagor; stop, F/6.8; film; pyro in tank; Azo Double A Hard.

As the editors were preparing this issue, January 10, the news was published—a surprise to most persons, but not at all to the Editor—that George Eastman was the mysterious donor of \$11,000,000, to the Massachusetts Institute of Technology, Boston, U.S.A. But this subject has been treated elsewhere in this issue.

It is always a pleasure to publish a print by E. M. Pratt, the chief winner in several PHOTO-ERA competitions. See our January issue. In his picture of a scene on Sacramento River, page 74, Mr. Pratt again shows his power as an original and delightful pictorialist. It is a fine example of his characteristic style—displaying a beautifully illuminated object, in this case, a steamboat, opposed to a dark setting. The watercraft occupies the right spot in the picture-space, and in a perfectly natural way balances the huge, dark mass at the right. In the distance, the eye notes a long iron bridge, which obviates possible monotony and completes the story told by the camera.

The pictures, by J. K. Hillers, of Zion Canyon, pages 75-77, are remarkable examples of photo-craftsmanship of the early wetplate-days, and will repay careful inspection. They are described in detail by Eyre Powell in his article.

To the many fine examples of Dr. T. W. Kilmer's remarkable gifts as an amateur portrait-photographer, published in PHOTO-ERA, during the past six years, the Publisher is pleased to add one of an eminent New York medical practitioner, a friend of Dr. Kilmer, page 81. It is a forceful character-interpretation and exemplifies the artist's mastery of the photographer's art. The error of the professional portraitist—the broad, white collar—is a bagatelle in the hands of Dr. Kilmer; for by his method of lighting, he has robbed this feature of its glaring whiteness and has given it character and interest. Comparisons are odious.

Data: Cooper-Hewitt Light; 18-inch Wollensak Verito; 5×7 Cramer Crown plate; 4 seconds exposure; enlarged on Artura Carbon Black.

In "Playful Puppies," page 83, W. C. Sawyer has produced a very original and felicitous pictorial design. Anyone familiar with group photography of lively four-footed animals, appreciates the successful character of Mr. Sawyer's picture. This is not a combination-photograph—each dog photographed separately, and the figure of each resulting print cut out with a pair of shears and arranged on a flat surface (paper or cardboard) and then rephotographed. No, indeed; but a photograph made in the ordinary way! As to the ingenious and artistic group—well, ask Mr. Sawyer.

"Sunlight in the Gorge," page 84, is by our late friend and contributor, Allen E. Churchill, though not one of his most successful compositions. Data: Bronx River, New York; July, 11 A.M.; sunlight; 5×7 View-camera; $9\frac{1}{2}$ -inch Zeiss Protar; stop, F/24; 3 seconds; plate; pyro-soda; print on Azo.

We consider it a privilege to publish a print by the brilliantly masterful pictorialist, F. J. Mortimer, F.R.P.S. Page 86 is honored by a picture made as a tribute to the naval power of proud, old England. What a forceful, significant and convincing picture! And what a splendid example of balance in pictorial composition!

Advanced Workers' Competition

THE "Domestic Pets" competition brought out much unsuspected talent in the form of thematic originality. In many instances, the creatures were arranged in accordance with well-known art-principles, although this was done without evidence of preparation that called for considerable ingenuity, care and perseverance. Those who failed to appreciate the artistic possibilities of the subject to be interpreted, were content to represent the pet, generally a dog, without any convincing evidence that a bond existed between it and its master. Even a suggestive title did not aid the beholder's imagination. It was evident that these contestants had not read thoughtfully Editor Beardsley's helpful essay in the October issue, hence the disappointing results.

Dr. A. H. Cordier, therefore, deserves high praise for originality of invention and brilliancy of execution. The pyramidal form of pictorial design is, indeed, a masterstroke, and the choice of illumination yields a degree of contrast and depth producing a fine stereoscopic effect.

Data: Made with a $7\frac{1}{2}$ -inch Protar lens on 4×5 camera; stop, F/8; $\frac{1}{25}$ second; Standard Orthonon plate; pyro-soda; printed on P. M. C. Glossy.

M. G. Dieterich is to be thanked for avoiding a commonplace pose of "Tabby" in favor of one so familiar to children, but rarely caught by the camera. The softness of definition of his subject is welcome in its appropriateness.

Data: April, 1919; fairly good light on porch; Graflex, $3\frac{1}{4} \times 5\frac{1}{2}$; $7\frac{1}{2}$ -inch Tessar Ic; stop, F/5.6; $\frac{1}{150}$ second; Standard Polychrome; pyro-soda, tray developed; same camera used for enlargement on Artura Carbon Black Grade D.

For the strictly unusual, Dr. J. B. Pardoe's "Jack and Jill" hits the mark. The complacency with which the dog bears his burden, and the simplicity of the setting, deserve high commendation.

Data: September; bright light; 10-inch Protar lens; stop, F/8; $\frac{1}{5}$ second; Standard Orthonon; pyro; enlarged on P. M. C. No. 8.

Beginners' Competition

THE view of Pike's Peak, presented by Henry A. Pratt on page 95, is typically excellent. A more experienced worker would have tried to avoid the sharp,

(Continued on page 106)



ON THE GROUND-GLASS

WILFRED A. FRENCH



Spirit-Photographs

THE English press has been devoting considerable space to Conan Doyle and his hobby—spirit-photography. Not that the clever novelist is conducting personal experiments—making exposures and developing the nebulous results. That is done by one William Hope, a poor cabinet-maker who lives in one of a row of humble cottages in the drab-factory section of Crewe. He claims a special mediumistic power which, when concentrated upon a subject, will produce the physical outline of the deceased person with whom contact has been made in the next world. Photographs are appearing in various journals which show clearly such physical outlines, in filmy effect, of departed ones pressed close against the persons in whose thought they have been brought to the possibility of photographic life.

Such a sensation has been created by Hope's spirit-photographs that doubt of their authenticity has caused the formation of a committee of six London skeptics, including Maskelyne, the famous professional magician, who scoffs at Spiritualism. The committee has employed the best West End photographer and also one from Fleet Street, and within a few days purposes to descend upon Hope, demanding him to make good his unparalleled pretensions.

Lord Glenconner, who is a brother of Mrs. Asquith, is highly intellectual and resents the suggestion that the crude cabinet-maker, by some obscure means, obtained in advance photographs of the dead when they were alive, and by methods known as "trick-photography" is hocus-pousing the public. Other "photographic mediums" are springing into activity since the Hope cult began.

This curious cult seems to have gained a hold on the minds of highly sensitive persons—possibly, as the result of the reaction of the anxieties caused by the war. It again brings to my mind a phase of so-called spirit-photography that enjoyed a lively but brief period of existence in America, about thirty years ago.

A firm believer in the photographically recorded form of spiritual manifestation, because himself a not unskilled practitioner in amateur-photography, was the late Alfred Hudson, of Hingham. Amused by the credulity and earnestness with which this worthy gentleman treated the artifices of professional charlatans, and actuated by a spirit of mischief, I conceived the idea of playing the part of photographer. Knowing that Mr. H. believed in materialized spirits and learning that he was eager to behold the spiritual form of a recently deceased friend, I quietly made my plans. Pretending to agree with him in his hopes, I suggested that he sit to me for his portrait, some Sunday afternoon, in the studio of the Boston Camera Club, of which I was a member. Thus, under favorable conditions, he could summon to his side the spirit of his late friend, and the two images could be impressed simultaneously upon a photographic plate. He assented with alacrity to this proposition, adding that, at least, the experiment was worth the trial.

It was a beautiful day in May and, naturally, the camera club was deserted. Conditions seemed to be ideal, and Mr. H., who was accompanied by his sister,

a spinster of about fifty, was in the best of spirits. I had brought my $6\frac{1}{2} \times 8\frac{1}{2}$ equipment, and a box of Cramer Crown plates, intact. I asked my sitter if he objected to any part of the outfit. After having inspected it, he approved, but stipulated that he be allowed to participate in the filling of the plateholders. He certainly did. He opened the box by cutting around the four lower edges in the most approved fashion, and handed me one plate after another, until the three holders had been filled and protected with little, round, adhesive seals he had brought with him. Before seating himself in front of the camera, Mr. H. examined the premises very carefully and moved all draperies, screens and furniture to one side, so that he had a clear view of the studio. His sister stationed herself at the entrance of the darkroom, which enabled her to watch the proceedings that were to follow. I think that she was a little skeptical regarding spiritual manifestations, and wanted to see that everything was above suspicion. My sitter seemed lost in deep thought, but soon raised his head, looked about him, then into the lens and in three seconds the exposure was made. Withdrawing the plateholder, I entered the darkroom, followed closely by Mr. H. I allowed him to remove the exposed plate and place it in the developing-tray. With beating hearts we watched the process of development, which began at once. With bulging eyes, and clutching my left arm, Mr. H. gazed at the appearance of a black form—it was the spirit standing at his side! He continued speechless until his own image took shape, and it was time to stop development, rinse and fix the spirit-plate. Several times, during the fixing-process, Mr. H., trembling with excitement, lifted the plate from the bath and held it before the only light. Hastily rinsing the negative under the tap, we rushed out into the light and there, surely, was a clearly defined white figure—the spirit of his departed friend! The second plate was exposed, developed and fixed. The result was precisely like the first. Curbing his emotions with difficulty, my sitter induced his sister to take his seat before the camera. Again the ghost was present, and in the same place. The fourth exposure yielded a similar result. That was enough; Mr. H. was convinced—Spiritualism had triumphed!

Have my readers divined the truth? Some time before the eventful day, I had exposed the plates upon the ghost (a figure draped in white); replaced them in proper order, and carefully sealed the box. Of course, in filling the plateholders, with Mr. H. at my side, I saw to it that the plates were replaced exactly as during the first exposures. Thus, I completely deceived the old gentleman, and he never learned the truth. He was happy in his belief, and to disillusion him would have been cruel—so I thought.



From Bad to Worse

WHEN "lantern slides to France," and "field camera bellows"—to quote a British contemporary—things must be getting to be lively among our good and sturdy cousins overseas.



EVENTS OF THE MONTH

Announcements and Reports of Club and Association Meetings, Exhibitions and Conventions are solicited for publication



George Eastman is the Man

EVER since it was rumored, last October, that the anonymous individual, known simply as "Mr. Smith," who had given to the Massachusetts Institute of Technology the munificent sum of \$7,000,000, and promised it \$4,000,000 more on condition that a like amount be raised from other sources, before January 1, 1920, whereupon his identity would be disclosed, the Editor of PHOTO-ERA was seized with the conviction that it could be none other than George Eastman, of the Eastman Kodak Company, Rochester, N.Y. He gave editorial expression to this conviction in November PHOTO-ERA, when he said that it was refreshing and impressive to find a man whose benefactions did not consist of fine phrases and nebulous theories, but of practical deeds born of purely altruistic motives. The nature of Mr. Eastman's offer accompanied by a perfectly reasonable provision was described at length, followed by a reiteration of the belief that Mr. Eastman was none other than the mysterious "Mr. Smith." The Editor had no clue, only his simple faith. But three persons were in the secret—Dr. Richard C. Maclaurin, president of the Massachusetts Institute of Technology, Mrs. Maclaurin and his secretary, Miss Miller; and they guarded it well.

The death of Henry C. Frick, last December, had given rise to the belief that the will of this great capitalist and philanthropist would prove him to be the elusive "Mr. Smith"; but the matter continued to be a mystery. In January PHOTO-ERA, the Editor again expressed his firm conviction that the mysterious benefactor was George Eastman and, at the same time, published President Maclaurin's statement that about January 1, 1920, the identity of his "Mr. Smith" would be revealed. And so, on the evening of January 10, the great guessing-contest of eight years' duration came to an end, when, amidst the enthusiastic cheering of hundreds of "Tech" men gathered at the alumni jubilee dinner in the Walker Building, Cambridge, it was announced that Technology's mysterious "Mr. Smith" was George Eastman, the "Kodak King" of Rochester, N.Y.

Throughout the evening, the assembled alumni were kept guessing as to the identity of "Mr. Smith" by screen-portraits of magnates of great wealth, including John D. Rockefeller, Otto H. Kahn, Henry Ford, Charles M. Schwab, Theodore N. Vail, Thomas A. Edison and Andrew Carnegie. Later, when the famous announcement was made, the picture of Mr. Eastman was projected upon the screen, and the assembled 1,100 "Tech" men sprang to their feet amidst a chorus of ringing cheers that lasted several minutes. During the course of the speech-making that followed, it was explained that Mr. Eastman fully intended to conceal perpetually his name as the source of his munificent gift to the Massachusetts Institute of Technology; but inasmuch as his latest benefaction of \$4,000,000 was made in the form of stock, the necessary transfer became a matter of public record. One of the speakers took occasion to refer to Mr. Eastman's exceedingly sound view of wealth. Mr. Eastman expressed it in one of the very few utterances he ever made in public. He was called upon, against his protest, to speak at a dinner where

funds were being raised for a charitable purpose. He said: "The rich man doesn't really give anything. He only distributes part of his surplus. How much wisdom and good judgment he exercises in seeing how this is used is, I suppose, all for which he deserves any credit. It is the person of moderate means, the poor man, who really gives." Apparently, Mr. Eastman himself selected Technology as a worthy object of philanthropy. The Institute did not in the first instance, at least, approach him with a request for money; but he approached the Institute, with a request that it receive his gift and keep the donor's name a secret. The only thing that marred the joy of the occasion was the absence of President Maclaurin, and of George Eastman—both on account of illness.

In conclusion, the Editor may be pardoned if he takes pride in the fact that his is the only photographic publication that has shown a marked and continued interest in this matter, or has asserted with unwavering conviction that "Tech's" mysterious benefactor was none other than George Eastman, of Kodak fame.

W. A. F.

George H. Seeley's Pictures

AN itinerant collection of about fifty photographs (figure-pieces and landscapes) by George H. Seeley, of Stockbridge, Mass., was exhibited in the Boston Public Library for two weeks, in January. It represents the artist's work covering a number of years of pictorial activity, and gives evidence of a sincere desire to express his artistic personality through the medium of the camera. It is plain that he shuns convention in all that constitutes a picture—design, expression and presentation. This is commendable in so far as he keeps within the bounds of reason, as he does in many instances. But when he attempts to lead the beholder into the realm of unfathomable eccentricity, he fails to interest him. Each of his pictures is the result of serious thought, and of deliberate, conscientious performance, but not always of the best artistic judgment. For instance, in a winter-landscape (No. 8), diffusion of definition is carried to a point where the trees in the middle distance are so obscured, that their character is entirely lost. Perhaps, Mr. Seeley thinks that so long as they are trees, and not rocks or what not, that is sufficient. There is no excuse in serious art, whether in painting or in photography, to distort an object beyond recognition. Again, in an apparent attempt to imitate a Corot landscape, the nature of the trees is materially altered. Besides, a white figure at the lower edge of the picture mars an otherwise well-balanced composition. In the portrait of Hon. Joseph H. Choate, the drawing of the features was so uncertain, that it was hard to tell, whether the expression indicated apprehension, nervousness or displeasure—to judge by the misdirection of the eyes and the lowered corners of the mouth. Why not a dignified repose for so eminent a personage? Sometimes, originality of design was replaced by sheer imitation of works of the great masters. Thus, Mr. Seeley's love of French art includes sculpture, as "The Dawn" (No. 49), where a draped figure eagerly tries to conceal an urn, was reminiscent of Saint-Marceaux's "Genius guarding the Secret of The Tomb," in the Luxembourg Museum;

yet it pleased as a highly imaginative and decorative design. On the other hand, there were many pictures that showed a feeling for pictorial composition. Among these was one that showed four large, white chrysanthemums arranged at the base of a transparent glass jar—impressive by its sense of bigness and breadth. Another felicitous arrangement was a group of sheep in an effective setting of Cimimerian darkness, that left nothing to be desired. The inevitable girl with a crystal globe was much in evidence. It is a hackneyed theme and, possibly, interesting more to newcomers than to experienced picture-lovers.

The exhibition had been well advertised and, consequently, was largely attended; yet it appeared that the message Mr. Seeley was trying to convey, failed to impress many of the visitors, young women in particular. All the same, the pictures made an appeal to the critical observer, for behind each picture was a forceful, enthusiastic personality eager to be recognized and to be understood.

There was a desire expressed by many visitors to know the name of the lens used by Mr. Seeley in his work. Upon inquiry he informed us that most of his work was made with the well-known Smith Semi-Achromate and Struss Pictorial soft-focus lenses.

Atlantic City Photographers' Convention.

IN Atlantic City, February 17 to 20, will be the annual convention of the Photographers Association of the Middle Atlantic States. From information received by L. L. Higgason, state vice-president of North Carolina, we learn that the event will be one of unusual interest, and well worthy the attention of every professional photographer, no matter what his specialty. As Mr. Higgason so aptly puts it, "The man who halted on third base to congratulate himself, failed to make the home-run."

Annual Show of Portland Camera Club

THE regular annual exhibition of Portland (Maine) Camera Club will take place February 28 to March 28, 1920, under the auspices of the Portland Society of Art, at 111 High Street, Portland, Me. This show will be national in its scope and the work of eminent pictorialists, throughout the country, will be included. As an innovation, only *unframed* prints will be shown, which means much as regards economy, also safety and speed in transmission. All pictures must be in the hands of the secretary, Oliver P. T. Wish, Portland Society of Art, Portland, Me., not later than 5 P.M., February 17, 1920. Further particulars may be obtained from Mr. Wish.

Chicago Camera Club

DURING January, the Chicago Camera Club, 31 West Lake Street, Chicago, carried out an interesting program of lectures, print-exhibitions and demonstrations. On January 7, Col. Henry Allen of the 108th Engineers gave a realistic account of his regiment's operations at the fighting front in France. Lantern-slides by Mr. Frank Farrell was an added attraction. The meeting of January 14 was devoted to the second of Mr. P. T. Tarnoski's series of demonstrations—"Half Hours in the Chemist's Laboratory." This was followed by "Lessons from the Old Masters" illustrated by lantern-slides loaned by the Art Institute. On January 21, the evening was taken up by studio-practice with the members acting as models. The regular print-discussion, an informal illustrated talk on "Old Deerfield" by Mr. Gordon C. Abbott and a business-meet-

ing occupied the club-members on January 28. An exhibition of prints by Mr. R. W. Rosendale and Mr. Gordon C. Abbott of The Camera Pictorialists of Los Angeles was on exhibition during the month.

Our Illustrations

(Continued from page 103)

dark, horizontal line which divides the picture in nearly two equal parts, either by choosing a different time of day yielding a more favorable illumination, or by local modification in the negative without, however, impairing the topographical character of the country. The sky, certainly, is very admirable.

Data: Colorado Springs, Colorado; March, 11 A.M.; bright sun; Criterion 5 x 7 camera; 17-inch rapid rectilinear; stop, F/16; 1/5 second; Eastman Ortho-Commercial Film; developed in M. Q.; part of negative shown enlarged in P. M. C. No. 5.

The view of Bronx River, by G. A. Smith, page 96, appears to be merely a fragment of a moving panorama. It lacks centralized interest. The eye is pleased to follow from one end of the picture to the other, without being arrested by some special object of interest, although the beauty of the locality is very evident. Artistic judgment is shown by suggesting the reflection of the tree-covered shore and producing an interesting foreground.

Data: August, 2 P.M.; bright sun; Seneca 5 x 7 camera; 8-inch Wollensak rapid rectilinear lens; stop, U. S. 32; Royal Foreground ray-filter; 1/5 second; Eastman Portrait Film; Eastman Special developer; Special Velox.

Our Contributing Critics

THE picture offered this month to our contributing critics for consideration is "At the Old Well" by George W. French. When we asked Mr. French for permission to use his picture, he replied: "I am perfectly agreeable to your using any picture of mine for criticism-purposes; and I am sure that it will be to my advantage to have it criticized."

Data: Maine; August, 2 P.M.; sunlight; 5 x 7 Poco camera; 14-inch Bausch & Lomb lens; stop, U. S. 16; 1/5 second; Standard Orthonon; pyro; Azo II.

An Acknowledgment of Christmas-Greetings

THE Editor of PHOTO-ERA wishes to acknowledge with deep appreciation, receipt of the large number of beautiful and tastefully embellished Christmas and New Year cards that he has received from subscribers, advertisers and friends situated in all parts of the world. It may be of interest to many that cards were received from friends in the Straits Settlements, Japan, China, India, South America, Mexico, Hawaii, Philippines and other parts of the old and new worlds. Truly, the PHOTO-ERA family is a large one, and is held together firmly by bonds of mutual respect and good-will.



Why No Prizes Were Awarded

MANY participants in the Advanced Workers' monthly competitions rarely if ever know why their pictures won Honorable Mention instead of one of three prizes, unless they ask to have them criticized and thus learn the reason. This question forms the leading editorial, this month, and should prove of interest to competitors, past and future.



LONDON LETTER

CARINE AND WILL CADBY



THE British Navy is to have its own photographic service. This will be a specialized branch, like gunnery, or torpedo-work, and, like these, it will be recruited from seamen and marines. There are to be two grades, photographer first class, and photographer second class, who will be paid one shilling a day and six-pence a day, respectively, in addition to the pay of their rating.

For years past, many members of the Lower Deck have been amateur-photographers. Some were so good at it, that during the war they were employed on photographic work for the Fleet. By way of a beginning six naval photographers are to be appointed to the Atlantic Fleet immediately, and we shall probably soon be wondering how the Navy ever managed to get along without its official photographers; for quite apart from the recording of marine events, there must be much work aboard ship, ships that are workshops, homes and fighting machines all in one, that can usefully be done with the camera.

The scope of photography seems to have no limit. Before we have regained our composure after hearing that it was photography which enabled the *Literary Digest* to be published during the strike of printers and compositors, by the elimination of typesetting (the matter being type-written and then photographed) it is sprung on us that by using a special lens, and giving an exposure of an hour and a half, a photograph has been made of the wrecked *Laurentic*, which lies on the sea-bed, off the Irish coast. We have so far been unable to obtain any detailed information about this under-sea portrait-study, and on the slender data at hand hardly feel justified in doing more than to record the report. Anyway, it seems as if more, much more than just a "special lens," would be necessary for the occasion, as deep saltwater in no way lends itself as an ideal studio, either as to lighting, or for the health of the apparatus used!

The "emotion-photographs," demonstrated at the meeting of the British Association at Bournemouth, may prove of practical use to discover the way to mental and physical wear and tear. Dr. Waller's machine for photographing the thoughts and emotions is novel and startling. We may now actually watch the diagram of our feelings as they arise, and read their strength on the screen. The experiment was made with some of the audience, men and women; but this machine had to be altered and rendered less sensitive for the women, lest their emotions should overwhelm the apparatus. All people take about two seconds to respond as could be observed from one or two rough and ready experiments with the audience. The emotions or thoughts responded to all sorts of stimuli, such as a sudden question, a threat to burn the victim, or a hand passed quickly over his eyes. In each case, the result was duly recorded. But somehow, while in good health, one does not appreciate the idea of the emotions and thoughts being electrically and photographically recorded, or at least measured, for it leaves the uncomfortable suggestion that our very souls may soon be sized up by the scientists.

One of the big London daily papers has lately been encouraging its readers to reveal what they would do with £15,000 if they suddenly became possessed of such

a sum, and it was not without amusement that we noticed one correspondent declared that, among other things, he would give himself a first-class darkroom. It is almost pathetic to think of this poor man struggling along under the difficulties of makeshift photographic accommodation. But we should feel a greater sympathy for him, did we not know that some of our own best work has been carried out under conditions that were of the most primitive description. And our conclusion—duly reached after many years' experience; and, by the way, once backed enthusiastically by the late Snowden Ward when we talked the matter over with him—was that the finest equipment in the world will not necessarily make a good photographer. Success is much more likely to attend the worker who, despite difficulties of makeshift arrangements, works on, than one who considers the luxurious fittings of an up-to-date darkroom a necessity.

Everyone who can is getting out of England during this dark, wet weather; but we still require passports even for the Channel Islands. Consequently, passport-photographs are much in demand, especially as officially printed instructions advise that the traveler have at least a dozen copies. To begin with, the initial application for a British passport must be accompanied by two copies of the applicant. Then, each country through which he proposes to pass, seems equally eager for several likenesses of him. It looks like a regular conspiracy in favor of the photographer. In our own particular case, we have dodged the professional by making our own photographs for the passport, and in so doing have discovered, to us, a new photographic fact. Now the essence of a passport-photograph is that it should be blatantly like the sitter. All ideas of artistic effects or kindly treatment for features—that are, perhaps, not so classic as we should wish—must be swept aside and sacrificed to the one fundamental need of absolute anatomical and physiognomic truth. In striving for this, we discovered that even a strong negative, printed on ordinary paper, did not give the same amount of likeness as when printed by such a medium as contrasty Velox. Of course, it was pleasanter to look at than when made excessively contrasty; but there was no denying that it was more strikingly recognizable, when treated thus, although not complimentary.

Of course, a moment's reflection, after the event, convinced us that the accentuation of contrast, so long as it did not leave chalky spaces on the print, must increase likeness, of a sort. But we do not recommend the method, except for passports; as the ordinary sitter might think that too much had been sacrificed on the altar of realism.

With professional photography doing so well, and getting the high prices at present ruling, it hardly seemed necessary for a Strand (London) photographer to cause a crowd to gather outside his window, this week, by filling it with a large donkey, a tiny pony, and a minute cart, with a notice inviting the public to be photographed in company with one or other of these "accessories," as a variant of the stereotyped cowboy-costume. The crowd continued to grow; but the donkey, the pony and the diminutive cart remained in the window; so, presumably, the bait did not draw.



BOOK-REVIEWS

Books reviewed in this magazine, or any others our readers may desire, will be furnished by us at the lowest market-prices. Send for our list of approved books.

TOPSY AND TURVY. By Carine Cadby. Illustrated with forty photographs by Will Cadby. Price, cloth, \$1.50, postpaid. London: Mills & Boon, Ltd.; Boston, U.S.A.: PHOTO-ERA.

This little volume is Carine Cadby's fourth successful venture in story-writing for the little folks. Topsy is the charming, irresistible feline who—with her friend and companion Turvy, a loyal, good-natured Airedale—occupies the center of the stage, and holds the attention of the child at bed-time or whenever there is need of solace and diversion. The two creatures are humanized by the author to the extent that they are endowed with the power of speech, and thus enable the reader or listener to follow them in their adventures and experiences, which are entertainingly narrated by the gifted Mrs. Cadby. Much of the charm of these little stories is due to the camera-illustrations by Will Cadby, the author's talented husband, which, unlike the results of the brush or pencil, are realistic and truthful, yet not without a degree of spontaneity of movement and expression. One-half the contents of the volume is thus given up to the adventures of Topsy and Turvy, and the other half to the description of a holiday spent by a little Belgian girl with her juvenile English friends and a holiday enjoyed by two tiny misses, Sybil and Robina. These are typical sketches of child-life in England and are also appropriately illustrated by Will Cadby. Altogether, this little book will fill a needed place in every child's home, or children's hospital, for occasional entertainment of a fitting, wholesome character. Copies may be procured from PHOTO-ERA after the arrival from England of the first shipment, which will be about February 10.

THE DESK STANDARD DICTIONARY OF THE ENGLISH LANGUAGE. Abridged from the F. & W. New Standard Dictionary. New Revised Edition. By James C. Fernald, L.H.D. 1,200 pictorial illustrations. Cloth, leather-back; indexed. Price, \$2.75, net. New York and London: Funk & Wagnalls Co.

This new dictionary supplies the need for desk-use in the office, the college, the study and for use on the library-table. It is designed to give the orthography, pronunciation, meaning and etymology of about 83,000 words and phrases in the speech and literature of the English-speaking peoples, and includes terms of such recent interest as ace, Anzac, blimp, Boche, poilu, jazz-band, soviet, shock-troops, camouflage, blighty, dud. Its vocabulary is sufficiently inclusive to cover all words that may be met in study or in reading. The padded indexes for each letter in the alphabet is a great convenience in looking up a word. This dictionary will be found indispensable to our many readers, especially those who write frequently for the daily or the magazine press.

THE SYSTEMATIC DEVELOPMENT OF X-RAY PLATES AND FILMS. By Lehman Wendell, B.S., D.D.S. 8vo; 78 pages. Illustrated with thirty-seven original photographs and plates. \$1.50 net; postage according to zone. St. Louis, U.S.A.: C. V. Mosby Company.

Readers of PHOTO-ERA will remember pleasantly the illustrated articles by Lehman Wendell which have appeared in the magazine for the past three years. Dr. Wendell's success as a practical photographer of nature-studies is well-known. In the present case, he has turned his attention to radiography and has produced a carefully prepared, well-written and skilfully illustrated text-book on the subject. Again, he has scored a success. Those of our readers who seek accurate and the latest information with regard to the preparation, exposure, development and correct use of X-ray plates and films, will find this book to be invaluable. Some of the chapter-headings are: Fundamentals, Methods of Development, Developing-Formulas, Alteration of the Negative by Chemical Means, Tanks, A Word on Chemicals, Useful Suggestions, The Darkroom and Lantern-Slide Making. The book is a clear, practical exposition of modern methods in radiography, written by an expert photographer-dentist. We can give no better endorsement to Dr. Wendell's admirable text-book.

Picture of Dead Woman and Child Appears on Ceiling

STORIES of miraculous photographs, not dissimilar to St. Veronica's handkerchief bearing a picture of the Savior, are appearing in the newspapers, once in a while. Here is one printed, January 8, in the *Washington Post*:

PRINCETON, Mo., Jan. 7.—That a "miracle" picture of a dead woman and her child appeared on the ceiling of her home, remained ninety hours, and was seen and recognized by former friends and neighbors, is the story told by dozens of the latter. J. M. Donelson, the woman's husband, said, at the time:

"Between nine and ten o'clock, on the night of December 19, I was reading the Bible. It seemed as if a voice said: 'Morg, look up,' and, in gazing up, I saw on the ceiling the picture of my wife, with our little infant in her arms, just as they were when they were buried, October 8 last. My father noticed my gaze, and asked me what I saw. I asked him and my mother if they saw the picture, and my mother said, 'Yes.' I asked her what it was. She said: 'What do you think it was?' and I said, 'It is the picture of Anna and the little one.' She said, 'It sure is.'"

"We then asked God to leave the picture on the ceiling. It stayed there until about two or three o'clock the afternoon of the 23d, when it disappeared."

Whatever the origin of this picture, the fact remains that it will provoke discussion among simple-minded people. In any case, PHOTO-ERA has no room for a department devoted to spirit-photography.—EDITOR.



Something Missing

"This catalog is no good," said a man visiting the Photographic Salon. "There aren't no prices in it."

"What?" said his wife. "You weren't thinking of buying any?"

"Certainly not," replied the complainer. "But how can you be expected to appreciate pictures, if you don't know the prices of them?"



RECENT PHOTO-PATENTS

Reported by NORMAN T. WHITAKER



THE following patents are reported exclusively for PHOTO-ERA MAGAZINE from the patent-law offices of Norman T. Whitaker, Whitaker Building, Washington, D. C., from whom copies of any one of the patents may be obtained by sending fifteen cents in stamps. The patents mentioned below were issued from the United States Patent Office during the month of December, the last issues of which have been disclosed to the public.

Patent, number 1,320,849, Apparatus for the Photographic Reproduction on Paper by Means of Electric Light, was issued to Francisco Gallego Escobar of Rosario de Santa Fé, Argentina.

A Photographic Film, patent, number 1,321,067, has been patented by Bernard H. Meyering of Rochester, New York, assignor to Eastman Kodak Company, of Rochester, N. Y.

Charles E. Hutchings of Rochester, N. Y., has received patent, number 1,321,101, A Folding-Camera, assignor to Eastman Kodak Company, of Rochester, N. Y.

Wenfred Johnson of Dale, Wis., has invented a new Camera, patent, number 1,321,102.

Exposure-Indicator for Photographic Camera, patent, number 1,321,868, has been issued to George W. Weiss, Brooklyn, N. Y.

Patent, number 1,322,398, Device for Developing Roll-Films, has been issued to Charles Louis Bambuck of Brooks, Alberta, Canada.

Retouching-Machine, patent, number 1,322,541, has been patented by George Charlton of Detroit, Mich., assignor to George F. Wiley, New York City.

Richard C. Maxwell of Endicott, N. Y., has received patent, number 1,324,203, on a Printing-Frame.

Patent, number 1,323,559, Photographic-Printing Apparatus, invented by Alexander Milne Troup, Sanford, N. C.

William C. Duryea of Princeton, N. J., has invented a Photographic Recorder, patent, number 1,323,175, assignor to Robert Hopkins, Tarrytown, N. Y., and John C. Habbs, Elmhurst, N. Y.

Patent, number 1,323,364, Method and Apparatus for Recording Designations on Photographic Elements, issued to George J. Hood, Lawrence, Kan., assignor to Eastman Kodak Company.

Louis F. McKelney and John A. Brandenburger of Indianapolis, Ind., have received patent, number 1,323,369, Photo-Film Carrier.

Photographic Shutter patent, number 1,325,317, invented by Sherman M. Fairchild, Anconeta, N. Y.

Patent, number 1,324,887, Apparatus for Making Identifying Photographs, invented by William F. Folmer, Rochester, N. Y., assignor to Eastman Kodak Company.

Old Photographs

MUCH attention is given to-day to record- and survey-work, and it must be very seldom, in this country at least, that interesting objects are destroyed without some photographic record being made of them, writes a correspondent in an English contemporary. It is impossible, in this connection, to praise too highly the work of the various survey-societies.

A very important—possibly the most important—section of record-work, however, seems to be almost entirely untouched. Photography has now been extensively used for considerably more than half a century, and there must be in existence thousands of old photographs which form the only impeccable evidence that is left of the appearance of much that has been destroyed during that period. These photographs, we must remember, are absolutely irreplaceable. They have been made with no reference to a permanent record; they are generally silver-prints of one kind or another, on plain or on albumenized paper—and are gradually fading away in frames, or albums, or perhaps lying loose. There is no society to hunt these out; and when once the images upon them have vanished, all possible record of their subjects will be gone.

Such old prints not only record the appearance of buildings, or of customs, or incidents, but they are all that we have to tell us what many of the great men of the last half century or more looked like. When these portraits have faded, all we shall have left will be paintings, which, whatever their value as works of art, are at least a very unsatisfactory substitute for a photograph as a register of facts.

Those who wish to undertake useful survey-work, therefore, could not do better than to hunt out old photographs of this character, and obtain permission to copy them while there is still some visible image left. It is not wise to "restore" them, as all restoration processes involve great risk of injury; but it is usually a comparatively easy matter to make a good copy.

The yellowing or fading of the image which sometimes has gone so far as to make it almost invisible to the eye, affects its visibility to the ordinary plate very slightly; and many a photographer who has puzzled over the problem of getting a good negative with plenty of contrast from a much-faded silver-print has been amazed to find, on tackling his task, that the difficulty he anticipated did not exist.

When the old negatives are themselves accessible, of course, all that need be done is to print them by a permanent process. Carbon is the best, as the negatives of those days had far more contrast than we are now in the habit of getting, and when printed on modern printing-paper, give results that are much too harsh.

Who is the Maker?

DEAR MR. FRENCH:—

A question which has always puzzled me is the following:

"A" is a snapshot tyro of an amateur. Snaps everything, just for the snapping's sake.

"B" is an advanced amateur whose work is world-wide known. B takes one of A's films, sees a possibility in it, works it up, makes enlarged paper negatives, again works these up, puts in skies, etc., etc. The finished 8 x 10 product in carbon *staggeres* the amateur "A," as he scarcely recognizes his own original negative. Question: Who has the right to sign the finished product? A. or B.?

Cordially,

A. T. CAREY.



WITH THE TRADE



Wollensak Optical Company Honored

As we go to press, we are interested to receive announcement from the Wollensak Optical Company, prominent manufacturers of photographic lenses and shutters, of Rochester, N. Y., that they have been invited to membership in the Rice Leaders of the World Association, an Association of national manufacturers whose name and products are known throughout the world.

The emblem of the Association, probably already familiar to our readers, is reproduced herewith and shows in heraldic fashion the four qualifications for membership which are



HONOR—a recognized reputation for fair and honorable dealings;

STRENGTH—a responsible and substantial financial standing;

QUALITY—an honest product of quality truthfully represented;

SERVICE—a recognized reputation for conducting business in a prompt and efficient manner.

This emblem is a guide in buying and is being featured in full-page advertisements in newspapers, throughout the country, to assist purchasers in their selection of high-grade outfits. There is a Wollensak lens for every purpose. Write for descriptive matter.

The Goerz Dogmar F/4.5—F/5.5

ELSEWHERE, in this issue, the C. P. Goerz American Optical Company, 323 East 34th Street, New York City, announces that it can supply a limited number of the well-known convertible Dogmar lenses. It will be recalled that this new Goerz lens was becoming very popular prior to the war and that the demand far exceeded the supply. We are advised by the manufacturers that orders will be filled as received. Interesting descriptive matter may be obtained by writing to the Sales-Promotion Department, which will be pleased to assist in the selection of a lens.

New Ansco Sales-Manager

We take pleasure to call the attention of the trade to the appointment of Mr. L. Dudley Field as sales-manager of the Ansco Company, Binghamton, New York. We have every reason to believe that Mr. Field will discharge his new duties with entire satisfaction to the photographic trade and with credit to himself.

Good Professional Photo-Coloring

It is not easy to find an artist who is successful in coloring photographic prints in artistic manner and at reasonable prices. We are glad, therefore, to recommend Jacobs Photo-Service, 31 Center Street, Brockton, Mass. We have carefully examined their work, in oils and watercolors. Their prices are fair and depend on the amount of work required by the customer.

The Need of Lens-Caps

It is quite common nowadays to see expensive lenses without lens-caps to protect them, *Studio-Light* points out in a recent issue. The cap is seldom used to make exposures but it should cover the lens at all times when it is not in use. If lens-caps were universally used on lenses, for the protection they afford, there would be fewer complaints traced to dirty lenses and fewer chances of scratching their highly polished surfaces because of the necessary cleaning.

Pressing the Button

At first sight nothing would appear to be easier than to actuate the release of a hand-camera, remarks our cotemporary *The British Journal*; yet, for all except the most rapid exposures a certain amount of skill is required, and the value of the film and plates wasted every year through unskilful button-pressing represents an income most of us would like to enjoy. The operation is in some respects similar to target-shooting, inasmuch as in either case it is fatal to good results to give a jerk at the critical moment. The skilled rifle-shot has a steady pull on his trigger while aiming, so that only a little additional pressure is necessary when he decides to shoot; and it should be the same with the hand-camera user. A thing to be guarded against is holding the camera loosely and "jabbing" at the release with the thumb or finger. Releases vary in pattern, but it is nearly always possible so to hold the camera that the thumb and fingers can be placed in opposition to each other, so that the necessary force is applied in the form of a squeeze. In the folding Kodaks this is usually to be done by placing two fingers under the baseboard while the thumb is on the release. As a rule, steadier exposures can be made with a hand-trigger than with a ball and tube or Antinom when the camera is held, as one hand has to be entirely devoted to the release, and, of course, the contrary is the case if the camera is mounted on a tripod, especially if "bulb" or "time" exposures are to be given.

Portrait-Lenses Wanted

THE A. T. Thompson and Company, 15 Tremont Place, Boston, Mass., is in need of portrait- and projection-lenses as announced in the advertising-pages of this issue. We understand that this company is willing to pay a high cash price for lenses that are in good order and that meet projection-requirements. Photographers should avail themselves of this excellent opportunity to dispose of their unused lenses.

MARCH

1920

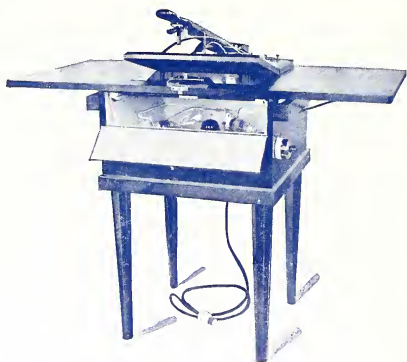
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PHOTO-ERA

The American Journal of Photography



BOSTON, U.S.A.



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HAMILTON REVELLE

PHOTO-ERA

The American Journal of Photography

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No. 3

How to Know Your Best Photographs

WINN W. DAVIDSON



WHETHER one is a photographer or simply a patron of some photographic studio, he is at times very much troubled in picking out the "best picture"; and, unless one has had considerable experience, the chances are several to one that a wrong selection will be made.

Time and time again, my friends have amazed me by their perversity in having a dozen portraits finished from a proof that was distinctly inferior to the others submitted; and, as I was not the photographer concerned in a number of these cases, my judgment at least had the merit of being impartial.

In the case of my own patrons, I might consider that they lacked sincerity or were hypercritical if they objected to my particular selection among a number of proofs; but in all sincerity I have been guilty of the same capriciousness in selecting proofs of myself by others.

On being shown a proof from one of my graduation-pictures that I expected to be particularly good, I was quite crestfallen and would have rejected it entirely had not all of my classmates exclaimed at its perfection. As it was, I allowed it to go into the class-record, but failed to order even one copy for myself. Yet, with maturer judgment, I now realize that it was by far the most flattering portrait that ever had been made of me, and an excellent likeness withal.

In submitting prints in photographic contests, the amateur may fail to select his best. He is misled, because a photograph has a picturesque "foreign look" or looks like an engraving, has a wonderful sparkle, records a glimpse of elegance or an attractive aspect of his own life—all of it, possibly, good material for a picture; but treated without sufficient regard to the laws of artistic composition. And all the while he has the prize-winner tucked away among his "purely commercial" subjects.

How shall he learn the difference?

I made the same mistake in my own case. The prints I sent in, merely as a matter of form in order to claim the prize, came back with a terse criticism—the two cows should not have been separated so widely and should have been so disposed as to form a single unit. There were other criticisms as well. I was considerably disgruntled. Didn't I know that the cows had been in exactly the positions shown in the picture? Wasn't it hard enough to record them even so—just at sundown with an 8-time filter on a moderately slow plate? Underexposed, to be sure; but that was the beauty of it. It hardly looked like a photograph at all, printed, as it was, on dull platino-bromide, with a wonderful bit of cloudscape in the corner; and, with the gnarled trees and daisy-carpeted foreground, it looked exactly like some old etching. That wonderful stone-hut might have been a bit from old Scotland; and also the quaint rock-fence! The lines of the hut were exactly parallel with the edges of the picture. I had done all that was humanly possible to avoid that particular feature and, at the same time, get the cows in the picture with their outlandish yoke-hobbles dragging from their necks. Quite a wealth of picturesque material, one must admit, for a postcard-plate; but can one doubt that my picture lacked "concentration of interest"?

Then, during a lull in my photographic operations—I suppose I must have become disgusted and quit work—a copy of a photographic magazine reached me in the mail. It was unexpected, as my subscription had expired and I knew that it could not be the complimentary copy accorded a prize-winner; for I had not dared submit even a print under the rules which excluded me as a beginner. As for winning a prize in the advanced class—banish the thought!

One beautiful picture after another on fine glazed paper appeared in the pages of that maga-

zine—I could never hope to get into such good company. Suddenly, there before me was my picture—5 x 7—reproduced in full size and looking as big as 6½ x 8½! I had to measure it to satisfy myself that it wasn't. And the joke was on me; for I had not suspected, even faintly, that I had produced a picture. I had sent it in merely for criticism—to find out if it was permissible to trim a photograph absolutely square. I found that it was, in certain circumstances.

The criticism was entirely favorable, and it made me open my eyes to new qualities in many of my negatives. My education had really begun—for when a criticism is favorable, it is easy to agree with the critic.

So it was with the first news-picture I ever sold. I had obtained nineteen different negatives of a sensational event and had sold half a dozen of them to a newspaper-syndicate with the privilege of re-sale to the national weeklies. Following the advice of the syndicate-editor, I divided my pictures into sets of two or three, mailing what I considered the best set to the most prominent publication and the inferior sets to less prominent periodicals.

Judge my amazement on the next morning when I found that the newspaper had "played up" one of the inferior pictures and reduced the others to very modest dimensions. Judge my further amazement when my best set came back with regrets from the editors; and, yet, I received a substantial cheque for an inferior set. The weekly "played up" the same picture that had struck the fancy of the newspaper-men. The public also confirmed the judgment of the editors; for the sales from that one negative far exceeded the returns from all the others put together.

Another illustration may not be amiss. I had made some pictures of a brother and a sister, and the girl obstinately selected a proof that I considered a monstrosity—I suppose that I should not have shown it; but one never can tell. The

figures were too large for the print and for the lens; the pose awkward; the lighting monotonous and the likeness may have been physically correct; but the effect was atrocious. The print that I favored was a veritable gem; but it was unconventional and showed a natural smile which condemned it in the eyes of its fair original. However, by judicious suggestion to the mother and brother, I sold them the good picture.

This illustrates one point: the sitter is not necessarily the best judge of his own picture. Indeed, travelling-photographers maintain that it is easy to sell a woman a photograph of her children, but they warn me never, never, to expect to sell a woman an unretouched portrait of herself. A man is apparently more open to persuasion; or is it because he is rarely photographed? However, there is another point involved; it took me nearly four years to realize that the good picture of brother and sister was in the prize-winning class. I submitted it—with the consent of the young lady—and captured a first prize. I looked upon it as an ordinary professional portrait; but it wasn't. The girl wanted a stereotyped professional portrait and was keen enough to see that it wasn't. Write your own conclusion to the syllogism and profit accordingly.

But let us proceed to the point of my article. If one would really learn the genuine worth of his pictures, he should submit them to friends, in contests, for criticism, to publishers for sale. One should see them in print and criticize them from this new angle. Let "Our Contributing Critics" tear them to pieces and glory in every fault revealed. People of artistic judgment should be compelled to act in some way on the merits of the pictures and one will learn eventually which among the pictures are good; or one will uncover such a diversity of opinion, that he may set himself up safely as an independent tribunal in matters artistic.





CARCASSONNE FROM VILLE BASSE

HERBERT B. TURNER

Odd French Corners for the Camerist

HERBERT B. TURNER

NOW that the ships of the world are slowly being restored to their proper function after the Great War many of us are beginning to think of a tour afield. Europe calls to us more strongly perhaps than do other parts of the globe; for have we not a desire to see those shrines where our brothers fought and died to save us from the horrors of Hunism? We wish to see with our own eyes those towns and villages wantonly destroyed during the nightmare-years that others have pictured so vividly for us through word and lens.

Before or after a trip over the stricken zone, we should by all means—to make our impressions comprehensive—see the other side of the picture; that part of France that remains physically untouched by the mighty storm of war.

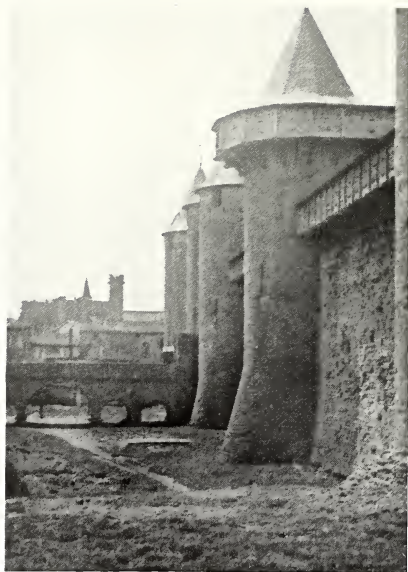
As I write, my mind dwells on a district of France that is so different from what the usual tourist sees in his hurried visit, that it seems upon inspection to be of another world. We, as Americans, can little realize—in these modern times of complicated existence, of electric wonders, of skyscrapers, and of hurry and bustle—that in France there yet exist mediæval towns whose inhabitants live the same life, for the most part, as centuries ago and that the external appearance of these towns has changed but little. The part that I have in mind is visited easily by train from Paris or Marseilles, although they are quite out of the usual tourist-path; and, to the man who loves to use the camera with the idea of

creating pictures rather than mere personal records, the field is rich indeed—oh, very rich. I refer to a part in Southeastern France, although there are other localities that I may write about, some time.

A pleasant way to approach that part of the country referred to, is by steamer to Marseilles. Free stop-overs should be arranged for at the time of purchasing the steamer-passage, in order that Spain may be visited from Gibraltar, if desired. Landing at Marseilles—in case one's photographic supply is low—there is a chance for the camerist to restock with Eastman goods—or those of other makes—before journeying on. One thing to remember in connection with photo-supplies is that, when away from the larger towns, and one has occasion to doubt the freshness of films—or cannot find the plate he desires—a telegram or postcard to the simple address, "Eastman Kodak Company, Paris," asking for photo-supplies to be sent c. o. d. to a given address on his route, will bring them promptly.

Marseilles, with its inner harbor-basin, its narrow streets in the older part of the town just west of the harbor, offers many excellent genre-studies. The view from the hill overlooking the harbor to the east, with its church of Notre Dame de la Garde, gives the camerist the opportunity to make beautiful and comprehensive panorama-views of city and harbor.

It is not of Marseilles, or Arles, or even the short trip from Arles to ancient Avignon, with its walls, its old papal stronghold—the home of



CHÂTEAU-TOWERS, CARCASSONNE HERBERT B. TURNER

seven of the Popes between the years 1309 and 1377—or the mediæval remains existing about it, and the splendid compositions that they offer to the photographer, nor yet again of Nîmes that lies in the path I have chosen, that I would write: although both Arles and Nîmes are rich in Roman remains, both having an arena more perfectly preserved than the one at Rome—the Coliseum—and fragments of walls, gates, temples and theaters. Nîmes, in fact, has in nearly perfect preservation a temple erected in the year 1, known as the *Maison-Carrée*.

I would begin my story with Carcassonne, which lies close to the Pyrenees, some four hours' distance by rail from Nîmes. The route by train from delightful, picturesque Nîmes, with its tree-arched boulevard lined with cafés, is through a bright, smiling land amid cultivated farms and vineyards. A halt is made at some four cities, and numerous towns are passed. The line follows the shores of the Mediterranean before turning inland and entering a hilly country.

Some forty miles inland, one sees first the massive walls of ancient Carcassonne, with its many towers and bastions rising out of the top of the hill upon which it is situated—for all the world, like a picture in some book of fairy-tales. One has to rub one's eyes to believe that he sees aright; for here is a mediæval city perched on high, existing in external form as Philip le Harde left it in 1280 A.D.—a unique stronghold, complete in itself like a stamped-out German toy-castle, far more impressive than Rothenburg or Nuremberg. Imagine a dream-castle that contains, within, a goodly city of crooked streets lined with picturesque old houses, a delightful church of the eleventh century with some exquisite stained-glass windows, and a château, the like of which, for sheer theatrical mediævalism of form, one can hardly match in Western Europe.

The train leaves one at lower Carcassonne, for Carcassonne is a double city of over thirty thousand souls. The new city, which lies on com-



THE CHÂTEAU OF CARCASSONNE

HERBERT B. TURNER



VISTA FROM WALLS OF CARCASSONNE

HERBERT B. TURNER

paratively flat ground, was laid out by St. Louis in the year 1247, and is called the Ville Basse. The old city, known as La Cité, is separated from it by the river Aude, which is here spanned by two interesting bridges. The hill upon which the old city stands, rises almost directly from the river.

The Ville Basse is not without interest, and the camera-enthusiast will find much to do in its central square during the morning-market; for here the peasants from the surrounding country set up all kinds of stands upon which they offer for sale a great variety of things—clothes and finery, as well as eatables, thus making numerous genre-groupings for the pictorialist. There is a church or two—besides the Cathedral of St. Michel of the thirteenth century—to photograph within and without. Then there is a boulevard that follows the site of the old city-walls, that is now shaded by fine plane-trees of great height.

In the modernized Grande Rue, that runs through the center of the town, are numerous interesting shops, and among them is one that carries a goodly line of photographic supplies. The Hotel Central, which faces the boulevard just mentioned, and near a delightful little public-garden that will attract the camerist, is a comfortable inn, somewhat less expensive than the Hotel de la Cité, in the ancient stronghold

upon the hill; but the wonderful view from the terrace of the latter is well worth the fifty cents or so additional per day. Then, too, it is in the heart of this mediæval dream. The rates before the war were about three dollars a day pension—all included—at the Hotel de la Cité, and about two dollars and a half at the Hotel Central. There are numerous other hotels of various rates in the Ville Basse.

The most comprehensive view of the ancient Cité is to be had from the bridge known as the Pont Vieux. Here rises in all its majestic proportions the feudal town surrounded by its high double walls with their fifty-four cone-roofed towers and bastions. In one form or another, it has looked down upon the little river since the Visigoths founded it on Roman remains in 418 A.D. In the 11th to the 12th century it prospered under its viscounts. It suffered much during the Albigenian war. St. Louis, in the thirteenth century, restored it and made several changes in 1250, and Philip le Harde made other improvements in 1280. In the nineteenth century, or to be exact, from 1855 to 1879, the great French architect, Viollet-le-Duc, who considered it the most perfect and picturesque mediæval stronghold in Europe, put it in order again as Philip le Harde had left it. During the Great War, certain dangerous German persons were incarcerated within it.



GATE, CARCASSONNE

HERBERT B. TURNER

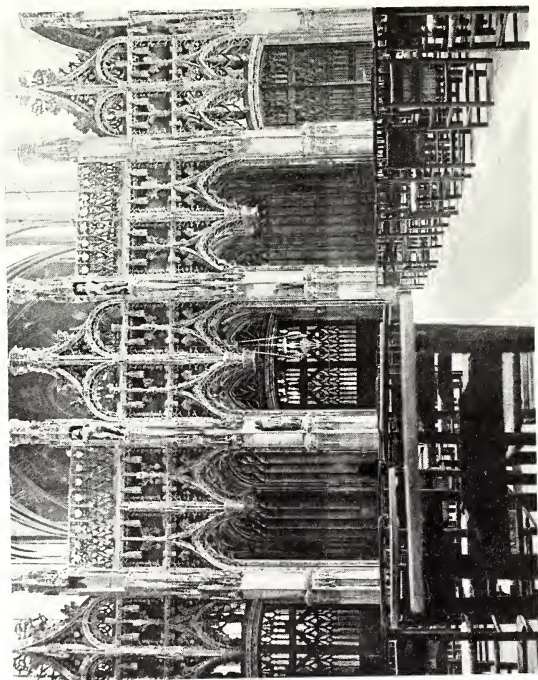
More than one negative should be made from the bridge and from the Cemetery of St. Michel in the Ville Basse, for the lay of the land does not offer one many chances to get a picture of the place, as a whole—and one never knows what may happen to a negative.

From the bridge, a winding road ascends to the only carriage-entrance to the city, which is protected by a moat and a drawbridge supported by massive twin-towers of great height. The road leads through a strongly fortified, arched portal at the foot of the towers into the interspace between the outer and inner walls of the city—a goodly space, in width as broad as an avenue. Here, another double tower confronts one, perhaps more impregnable than the outer one. Through this the main street of the city is reached.

As the inner wall of the city is higher than the outer, the camera devotee will make haste to mount to its rampart in order to record the vistas from the footway, or from the windows of the various round towers. Not only can compre-

hensive views of the enclosed city, with its roofs, squares and gardens, be made from these walls and towers; but superb pictures, from the bastions, of the inner wall itself, the moat-like interspace between it and the outer wall, and thus over the outer wall to the river, the Ville Basse below, and the pleasantly diversified country beyond, dotted with farms and villages, extending to the snow-capped Pyrenees in the distance.

On the Ville Basse side, which is at the opposite side from the roadway-gate, is the only other entrance to ancient Carcassonne—a pedestrian-entrance more fantastic, perhaps, in its fortification than the former, for one has the slope of the hill to help in the composition as well as the walls, towers, gate, and the eleventh-century château, with its loopholed walls and towers surmounted by overhanging fighting-platforms that here form a part of the inner wall. But what is the use to continue, for my description of this strange place is so inadequate, that I cannot make the reader see it or feel the wonder of it.



ROOD-SCREEN, CATHEDRAL OF STE. CECILE, ALBI

HERBERT B. TURNER

Days can be devoted to making exposures that, by all means, should be tank-developed at night, so that one will be sure to have perfect negatives before he leaves this unique place in Europe. And this reminds me that in many hotels in Europe there are darkrooms at the disposition of guests; but my memory does not serve me as to whether those in Carcassonne are so blessed.

I used a large changing-bag, and with it found it fairly easy to fill a 4 x 5 plate-tank of the ICA style without mishap. Such a bag should be bought or made before venturing on a European tour, for it serves one faithfully and well, and, folded, is packed easily with clothes. The Lumière concern puts up a hypo-chrome-alum compound in the shape of sticks, costing less than five cents, that are dissolved easily in 32 ounces of water, and make a perfect fixing-bath. One can get them from almost any photographic supply-shop.

The traveler can photograph without permission anywhere in France—or could—except in some churches, where such permit will be given by asking those in charge. Of course, this does not apply to modern fortified places. A tripod and an exposure-meter should always be included, and a ray-filter, of course, should be at hand.

It is to be supposed that the photographer has studied each winding street for composition, has carefully noted the older houses and their doorways, that he has done details of the gate-towers, the drawbridge, has gone around the city between the walls and made exposures at different angles and entered each tower-room for exposures from out their windows, sometimes including the picturesque old windows themselves as a frame for the view. The surrounding country should be explored to get the city from the distance, which can be done particularly well from the south. After this has been faithfully accomplished, he will have a collection of negatives, priceless to himself, from which he can enlarge by soft or sharp lenses on the various pleasing surfaces our market affords, or work up in gum, into something pictorial. Remember the famous poem of Carcassonne, for, like the old pilgrim, most of us never reach Carcassonne.

Taking the train again, we follow the route which leads us fifty-seven miles to the northwest to Toulouse, about one hour and twenty minutes' ride through a broad valley thick with farms, and now and then punctuated with small towns cuddled about some old church with a fortified tower. On Toulouse I will not dwell, although it is a prosperous city of over 150,000 inhabitants, with a long history. Its beautiful parks, its fine churches, its cathedral and many old buildings embellished with rare sculpture as



COURT-YARD, ALBI HERBERT B. TURNER

well as modern streets and fascinating shops, must be passed over, for it is to the ancient city of Albi, which lies about one hour and a half distance by rail to the northeast, that I would lead you.

One had better restock with plates and films at Toulouse; and, by the way, this city contains a very good photographic establishment, which carries an extensive line, for, if my memory serves me, the route ahead of us—except for now and then films—is quite bare of things photographic.

Albi offers the camerist much to do, for, as I have said, it is an ancient city. It has been left by the wayside in the march of progress, for which we, who are in search of the picturesque, are duly thankful. This city of twenty-five thousand people is situated in a sweet, pretty land, through which the river Tarn winds gracefully, caressing its foot. Here, again, we have a town built on a hill, filled with delightful narrow streets lined with half-timber houses of by-gone times that group themselves about a strange-looking cathedral, that is in architecture exteriorly more fortress than church.

Here and there, tucked in among the timber-houses, rises a stately mansion of masonry with a loopholed tower, for it was in troublous days that these were built. Their doorways and



ARCH OF PONT NEUF, ALBI

HERBERT B. TURNER

windows are often pleasantly sculptured and offer close-up studies; and, with the small courtyards, make, in many cases, the best of compositions. Such soft tones age has given their architectural embellishments and walls that to record them is a delight. The half-timber and half-stucco houses in the older and central part of the city veritably lean against one another for support in their advanced age.

A tripod is needed, and prolonged exposures should be made in these narrow ways to get the proper details in the shadows of the old buildings. One vista follows another as the pictorial-ist advances.

The Cathedral of Ste. Cecile, one of the finest and quaintest churches of Southern France, and a perfect example of Southern Gothic architecture, was constructed to serve as a fortress as well as a place of worship. The huge tower looks like a keep and is pierced with narrow loopholes. The great mass was built between 1365 and 1485 A.D.

An ideal place to begin one's photographic study of the city and cathedral is from the subur-

ban town of La Madeline just across the river which is connected by two long bridges upheld by a series of splendid arches. These bridges are of themselves things of beauty, and the older and more central can be photographed from the other, the Pont Neuf, which shows the city rising beyond it and clinging about the Cathedral; and also its neighbor, the Archevêché, a thirteenth-century fortress with a keep as strange and fantastic in its way as the Cathedral itself.

From a little way up the river-bank to the east—close by the public washing-place—is a vista framed by the very large and superb arches of Pont Neuf. The usually present washwomen kneeling at their work on the sands in the foreground, the old bridge in the middle ground, and the cathedral and city in the background combine to make a fine composition a most effective one.

There are so many viewpoints from which Ste. Cecile can be photographed that I will not enlarge upon the theme, knowing full well that, should any of my readers visit Albi, they will



FROM PONT NEUF, ALBI
STREET-SCENE, ALBI
HERBERT B. TURNER



ENTRANCE-GATE, CORDES

HERBERT B. TURNER

surely seek them out. However, before leaving the subject I must say a word of the Rood-Screen that divides the interior of the cathedral, a delicate lace-like thing of solid stone that cannot be matched for pure beauty in all Europe. To record it successfully on a plate or film a full minute will be required at F/8 on a rapid plate; but it is worth the spoiling of a dozen plates to make one perfect negative. Oh! there is much material at Albi to repay one, never fear.

And now, the work done, one must dine and sleep. A quainter inn than the St. Antoine it would be hard to find. It is a low rambling structure from the exterior; and is frescoed its entire length with scenes depicting a banquet of old, with lackeys bearing roasted peacocks, boardheads, bumpers of wine and other delectable things. On the interior, there are ancient walls and uneven floors; but all beaming good cheer and comfort. Everywhere, from the swinging sign above the door over the sidewalk to the carved plaques within—and even on the very table-crockery—is depicted the story of that very ungallant, but good man, St. Anthony, in company with the devil, a nude "lady" and his ever-beloved pig.

A little over fifteen miles to the west of Albi

lies Cordes, a town that suggests some of Maxfield Parrish's compositions, for it is one of those mediæval, cone-like towns with a tower rising out of it, sitting like a hat on a hill-top. A pleasant way to reach it, and, perhaps, not too costly, is by automobile. The road, soon after leaving Albi, begins to climb the hills on the farther side of the Tarn. As one looks back, a delightful view of the little city and its great church is to be had. Climbing on, one ascent after another is made until a vast panorama of the whole beautiful country is to be had bisected by the gracefully winding river. It is all so typically the France of the south! At length, the first sight of Cordes is had between two hills with rows of paint-brush-like poplars leading the eye into the picture. One becomes fascinated, and quickly hurries on to the mass of ancient houses that rise, one above the other, in pyramid-form—with here and there an old city-gate of weathered stone and suggestions of the former walls.

The automobile—should the traveler have come from Albi in one—comes to a stop at the bottom of the hill—for no motor-car could get into the town—and then one begins to appreciate how lofty the place really is, and to be convinced of it fully as the first mediæval gate is reached.



GOthic WINDOWS FROM MARKET HALL, CORDES

HERBERT B. TURNER

Entering the principal street through the gate, we find here a remarkable collection of houses, some of which are of the thirteenth and fourteenth centuries, having splendidly decorated Gothic windows. Although Cordes is a modern town, as compared to Albi—for it dates only from 1222, being founded in that year by Raymond VII, Count of Toulouse—it probably preserves its thirteenth-century characteristics better than any other in France. Albi, by the way, is probably pre-Roman; at any rate, it was, in the Roman period, the capital of the Albigenes.

Nor far from the gate, and to one side of the main street of the village—for it is little better than that now, as it has less than 2,000 population—is a small tree-shaded square, which commands a wonderful view over mile upon mile of delightful country. One looks down over moss-grown red-tiled house-tops to a little winding river bordered by poplars. The white French roads extend out like ribbons to the far hills upon the horizon, passing pleasant stone-farmhouses on their way, and the whole country seems to be

a variegated checkerboard of fields under cultivation. I recorded by camera four old gates to the town, and there may be others. Here and there, is a fragment of the four protecting walls that held the city in safety—one within the other.

The Gothic windows that I spoke of as lighting the twelfth and thirteenth century houses are for the most part almost too high to be reached successfully by the camera; but from the quaint market-hall, however, there is at least one chance to record some very fine specimens. The pictorialist will be in ecstasies in Cordes. Should several days be set aside to photograph all that can be found there, the little hotel in the tree-shaded square, known as the Hotel du Nord, will, without doubt, be found to be very comfortable. However, much can be done in an afternoon; for the odd little streets are not many nor long, the old gates are near at hand, and the panoramas to the four points of the compass lie before one.

(To be continued)

Home-Portraiture—Dealing with Sunshine

WILSON TODD

WHEN the home-portraitist arrives at Mrs. K.'s home, he finds that the only light available for his use consists of a number of windows on the south-side of the house. It is about two thirty in the afternoon and the sun is streaming into the rooms. The average worker, in many cases, would consider this light out of the

are intended to illustrate two methods of using a pair of south-windows, with the same conditions of light that prevail in each case. In Figure 1, we see the sunlight, unscreened, streaming into the room and the camera—not the subject—placed on the sunny side. The camera is protected from the sun's rays by an opaque screen—merely a green shade fastened to a small



Fig. 1.

FIGURE 1



Fig. 2.

FIGURE 2

question as it is too glaring and gives sharp, black shadows; and he probably feels discouraged not to find the soft north-light he had hoped for. He is right, in a way; but he cannot always choose conditions. Of the two extremes, too much light is better than not enough. The home-portraitist is sure to have, at least, sufficient illumination to make short exposures; and, by properly controlling it, he can do anything that can be done with the north window.

I have constructed two crude diagrams which

reflector-stand. The subject is placed just out of the sun, but in a good, strong light which, it will be noticed, gives about the same illumination that a north-light would give. In this case, we are going to make our picture right through that shaft of sunlight but without letting it interfere with the lighting of the subject or letting it fog the plate. It is just the same principle as if one were to take a telescope and look from a window of his home, through the bright out-of-doors into the living-room of his neighbor's home. Would

the brightness of the outside keep him from seeing the interior of the room distinctly? No; not unless the light shines into one's eyes—or, may I say, the lens—and as I have already stated, the lens is well protected from the sunlight by the little, green shade. Both windows have been covered up from the bottom by fastening a dark cloth over their lower parts with push-pins, so that the light falls upon the subject at an angle of about forty-five degrees. The reflector is used in the regular way to aid in illuminating the shadow-side of the subject and to balance the light properly.

Figure 2 is just a repetition of what is done in Figure 1, excepting that the window-panes have been covered with white tissue-paper or tracing-cloth, thus getting rid entirely of the shaft of sunlight. The tissue is put on either by push-pins fastened to the woodwork or with bits of gummed paper to hold it at the edges. The gummed paper can be removed quickly with a damp cloth. Notice the brilliancy of the light as it comes through the tissue-covered window! It seems to have twice the actinic power of that

from the north-window, and the light seems to penetrate every little line of the face with a softness that would be difficult to get with the straight rays of a direct light. The sun's rays have been diffused into a brilliant volume of luminosity that can be handled and worked as if it were modeling-clay.

We have proved that it is not necessary to show sunlight in the picture just because we are working in its presence. Still, there will be times when a bit of sunshine will add interest to the picture, and to be effective it must be used with the greatest discrimination. There are many beautiful home-portrait studies to be made on the veranda or in the garden, and this style of portraiture handled in a professional way is gaining constantly in popularity. It might be well to use a color-sensitive plate or film for the sun-pictures and develop them with a soft developer with less carbonate. When you see a good thing, record it and show it among your proofs. Don't count the sunshine among your hardships; think of it as a distinct asset and make it one.

Save It!

FREDERICK C. DAVIS



Of course, it is self-evident that photographic processes result in wastes which contain a certain per cent of silver and other precious metals. Perhaps you thought that the silver, gold and platinum in these wastes is not enough to worry or bother about. If you are an amateur who uses, let us say, not more than a roll or two of film a week, following the advice of this article will not make you much richer, nor save very much silver. But the scraps and old, useless solutions of a large photographic dark-room, a studio or a professional finishing-department amount to a great deal and the information given here will represent a real financial saving.

Did you ever stop to think how much silver there was in a sheet of paper, or in that old developer, or in the fixing-bath? Certainly, not much. But when you repeatedly throw away small bits of scraps, or throw away old solutions, one after another, you are throwing away money. Did you ever stop to think that, possibly, there was a little gold left in that toning-bath? Did you ever stop to think about how much silver a hypo-bath will consume?

Well, let us stop a moment to think about it.

Your country is always in need of silver, gold, platinum and other precious metals. Perhaps you need them yourself—I know that I wouldn't object to have some! What you should do, is to save every scrap and old solution that you can get your hands on. Did you ever notice a cloudy look in the wash-waters from those silver-prints or wonder what it was? Possibly, silver. Exactly! It was silver. Why didn't we save it?

The washings from the silver-prints hold the unaltered haloid, silver chloride, in suspension. Gather all these wash-waters you can, put them in a large tub, and let the solution settle. The cloudy matter will sink to the bottom. Add to this and keep on adding until the sediment amounts to enough to work with. Then stir up the whole solution, and filter it. Collect the precipitate. This precipitate will be important later. We shall call this precipitate Precipitate A.

The trimmings from your prints amount to a great deal, in time. Some of the prints you make are spoiled; but there's silver in them, as well as in the trimmings. Save all these apparently insignificant waste-products, put them in a dish, and burn them to an ash. Do this with your trimmings, again and again, until the ash

has accumulated to a considerable amount. This ash will contain some silver, principally in the metallic state. Also, there are some unaltered salts left—the same as when they were in the emulsion, consisting of silver-chloride or bromide.

When a large quantity of this ash has been gathered, place it in a large bowl—not a metal one—and pour over it a quantity of diluted nitric acid. A chemical action will begin immediately, and dense, heavy, rusty-red fumes will arise. These fumes are nitrogen peroxide, and are extremely injurious to the mucous membrane lining of the mouth, throat and nose. Be very careful not to inhale any of this gas. It is best to conduct this phase of the recovery of the silver out-of-doors, or under a hood as used by chemists. When silver is treated with nitric acid in this manner, it is converted into silver-nitrate. After all the silver has been converted into salts—which can be determined by observing when additional acid will cause no more action or bubbling—dilute the solution which has been formed and filter it. This solution, besides containing the silver-nitrate salt, will contain impurities which we shall get rid of. Suppose that we separate them. Very well: to this solution—after it has been filtered—add common salt, which is sodium-chloride, and continue to add salt until no more of the dense white precipitate is thrown down. It is best to dissolve the salt in water before adding it to the solution, as this will hasten chemical action. The white precipitate is silver-chloride, which we had in the first place in the emulsion. It is much purer than when it was in the ashes. Be careful not to add any more salt-solution than is necessary to complete the precipitation, otherwise the precipitate will be dissolved again, with a subsequent loss of silver. Filter the precipitate out of the solution, and wash it several times. Then spread it out on filter-paper or glass to dry; and, after it is dry, add it to Precipitate A.

However, the residue ash, which we filtered out, might possibly contain more silver. Let's see if it does. The ash, since it has been treated with acid, is naturally acid, and must be neutralized—made neither acid nor alkaline—by treating it with a solution of sodium carbonate, which is used in every household under the name of sal soda or washing-soda. Add a solution of this salt to the precipitate until all bubbling ceases, then add a solution of sodium thio-sulphate—hypo—after the precipitate has been washed thoroughly. Allow this to stand for an hour, then filter. If you have old fixing-baths standing around, add this to them. If you have not, save this precipitate until some old fixing-baths have accumulated, and then add.

I have always felt that those old hypo-baths were concealing something. You would be amazed at the quantity of silver-salts a trayful of hypo will dissolve. Place all the old fixing-baths in a tub. When a quantity of solution has accumulated, add potassium sulphide while stirring. Add just a trifle more sulphide than is necessary to cause all the precipitate to settle. The precipitate formed is silver-sulphide. Allow this to settle, and when all of it has gathered at the bottom, pour off the clear liquid above—decant, as chemists say. Repeat this operation with other fixing-baths until you have collected quite a bit of precipitate. Gather this precipitate on a sheet of filter-paper, dry it, and then, if you wish, you can proceed to reclaim the silver in the following manner: heat it to a very high temperature, and it will melt; and, when it is cooled again, you will find a button of silver-metal.

This method requires means to produce a high degree of heat, and, as few photographers have such apparatus, I will give another method. Dissolve the precipitate in aqua regia—royal water, nitrohydrochloric acid—a mixture of nitric and hydrochloric acids. The precipitate will dissolve and form silver-chloride. By evaporating this solution, the water and acid may be got rid of; or by simply filtering, the same result is obtained. I prefer to filter. Then this precipitate can be placed with Precipitate A.

Wasted plates are also a means of throwing away much silver. The emulsion that contains silver can be treated in the following manner, which will enable the worker to extract all silver from it. Strip the plates of their emulsion—this can be done in a number of ways, one of which is to allow the plates to soak in hot water. Then boil the emulsion for several hours in dilute sulphuric or hydrochloric acid. This will destroy the gelatine itself and dissolve the silver-salt to a certain extent. The silver-chloride or sulphate is only very slightly soluble in the acid-solution, and the amount dissolved is negligible. Filter off the precipitate, and place it along with the other—with Precipitate A. One way to reclaim the silver from the salt is to mix it thoroughly with twice its weight of sodium carbonate and with a little powdered fused-borax, and heat it to a very high temperature in a crucible. When melted, the fluid may be poured into an iron-mold and allowed to solidify. Under the slag, at the bottom, you will find a button of pure silver-metal.

Still another way to treat this precipitate is to suspend it in water, adding potassium hydroxide—caustic potash—and milk-sugar, and boiling the solution for several hours. The silver-salts



BETH BEAD AS AIRADNE

LOUIS FUCHENSTEIN

will be decomposed, and you will be able to see the gray, finely divided particles of silver settle to the bottom of the containing-vessel. Filter off this precipitate, dry it, and then heat it strongly to destroy any organic matter which may be present.

If you wish, you can sell this silver at market-value, or you can convert it into silver-nitrate and use it yourself in making emulsions, intensifiers, and so on. To convert the silver-metal into nitrate, place the metal in an evaporating-dish or saucer or any small porcelain-vessel, and cover it with nitric acid. The silver will dissolve. The liquid may then be evaporated, and thus concentrated. Be careful to heat evenly, slowly, and not too strongly. Evaporate to dryness, add fresh, pure water and then concentrate again. This is done to get rid of the excess nitric acid. This concentrated solution can then be diluted with water and set aside to evaporate, when crystals of silver-nitrate will be formed which can be gathered and dried. The dish in which the liquid is kept, while evaporating, should be covered with a clean sheet of paper or cardboard to prevent dust lodging on the salt and thus decomposing it to a certain degree.

The silver can be recovered in another way. All the old hypo-baths can be saved in one solution and then add to it as much of Precipitate A as it will dissolve. Filter, and use the concentrated solution for the following method: place the solution in a large bowl and place some granulated zinc in the bottom. After allowing this to stand for several hours, pour off the solution and add more. The zinc will soon be found to be covered with silver. Separate this zinc from the solution and, adding to it sulphuric acid, the zinc will be dissolved and the silver left behind. Be sure that the zinc used is chemically pure, or there will be carbon or lead-sulphate mixed with the silver-metal. It is best to filter off this silver, dissolve in acid and convert it into silver-nitrate, as stated above.

Old toning-baths are secret gold-mines—literally. They contain much gold, as well as some silver. Keep these baths in a jar until a reasonable quantity has been gathered, and then evaporate, thereby concentrating it. To this concentrated solution, add granulated zinc and allow it to stand over night. Both silver and gold will be deposited on the zinc-metal. Filter, then wash it several times. Then boil the zinc in nitric acid, thus dissolving it, leaving behind the precious metals. Treat the precipitate with ammonia and wash several times. Then boil in aqua regia and evaporate the resulting solution to dryness, when the gold will be found in crystals of gold chloride, ready to use again in com-

pounding new baths. The ammonia which was used contains the silver. Treat this with nitric acid, and silver cyanide will be thrown down. Add this, after filtering, washing and drying, to Precipitate A.

Platinum can also be saved. Burn all old platinum-papers, prints, scraps and trimmings, treat the ash with aqua regia, filter, and the resulting solution can be used in making toning-baths. Old platinum toning-baths can be concentrated, and treated with zinc exactly as in the case of gold.

Uranium is another precious metal. Treat all baths containing uranium with aqua regia. Then add ammonia in excess, when a precipitate will form. Collect this precipitate and wash it, then boil it in acetic acid. Evaporate this solution to dryness very carefully, and the acetate thus obtained can be used for a new bath.

In performing these chemical processes, be very careful. The acids used are all very poisonous and extremely active. Be extremely careful not to inhale any fumes generated; also, do not let any of these acids come in contact with the skin or clothing. In case this should happen accidentally, cover the spot immediately with ammonia and then wash well.

Another important point is the purity of the reagents used. See that all chemicals are c. p.—chemically pure. The same should be said of the water—never use water that has not been filtered thoroughly, or distilled. Tap-water contains salts which will affect the proper working of the solutions; and, often, the result will be a complete loss of the silver which you are trying to reclaim.

An editor of a very prominent magazine in the east—after I had outlined these methods to him—objected, saying, “Many of your methods of saving silver and other precious metals would involve a waste equal to or greater in value than the metal saved.” This statement was made by the editor without actual trial, and although the chemicals are high-priced, the amount of silver saved far over-balances the expenditure necessary. I have reclaimed much silver, gold, platinum and uranium by these methods, and always profitably; and, although the metals were not sold, they were used in making up baths for my own darkroom. Much may be saved by these methods of reclamation. Save those old baths and those scraps!



In nature, color exists no more than line; there are only light and shade. Give me a bit of charcoal and I will paint a picture. Painting consists wholly in sacrifices and in accents.

Francisco Goya y Lucientes.

Some Critics on "Likeness" in Portraits

IT is sometimes said that the essential of a photograph is that it shall be a good "likeness," and that whether it is a "picture" or not is only of secondary importance. But do sitters want a good "likeness" and nothing more?

Much depends upon the meaning given to the term "likeness." Ruskin says that "We constantly recognize things by their least important attributes, and by help of very few of those; and if these attributes exist not in the imitation, though there may be thousands of others far higher and more valuable . . . we deny the likeness; while if these be given, though all the great and valuable and important attributes may be wanting, we affirm the likeness. . . . One portrait of a man may possess exact accuracy of feature, and no atom of expression; it may be, to use the ordinary terms of admiration, bestowed on such portraits by those whom they please, 'as like as it can stare.' Everybody, down to his cat, would know this. Another portrait may have neglected or misrepresented the features, but may have given the flash of the eye, and the peculiar radiance of the lip, seen on him only in his hours of highest mental excitement. None but his friends would know this."

This was, of course, written of paintings, but the same points arise in the criticism of photographic portraits. Lewis Carroll clearly recognized that something more than "exact accuracy of feature" is desirable. He deals with the subject in that amusing parody on "Hiawatha" wherein the hero photographed a family group, and—

"Did at last obtain a picture
Where the faces all succeeded—
Each came out a perfect likeness,
Then they joined and all abused it,

Unrestrainedly abused it,
As the worst and ugliest picture
They could possibly have dreamed of;
'Giving one such strange expressions—
Sullen, stupid, pert expressions.
Really any one would take us
(Any one that didn't know us)
For the most unpleasant people.'
Hiawatha seemed to think so,
Seemed to think it not unlikely."

There are few people who ask, as Oliver Cromwell did, to be painted "wart and all." A cynic might say that the most successful portrait is that which flatters enough to satisfy the sitter without going so far as to provoke the derision of the sitter's friends. How often does the receptionist hear, "This one pleases me most, but my friends do not think it is like me."

Hazlitt, who confessed that he found more pleasure in painting than in writing, mentions "likeness" in one of his essays. "There is always something to be done or to be altered . . . something is wanted to the nose or to the eyebrows, it may perhaps be as well to leave out this mark or that blemish . . . a squint or a pimple on the face handsomely avoided may be a link of attachment ever after. He is no mean friend who conceals from ourselves, or only gently indicates, our obvious defects to the world. I do not conceive there is a stronger call upon the secret gratitude than the having made a favorable likeness of anyone; nor a surer ground of jealousy and dislike than the having failed in the attempt."

The wise photographer will try to earn this "secret gratitude." He will so pose and light as to emphasize the sitter's most pleasing features and expression, and, even then, there will be something left for the skilful retoucher's knife or pencil—"to leave out this mark or that blemish."—*The British Journal*.



LAKE AND MOUNTAINS

KATHERINE BINGHAM

An Actor and His Hobby

HAMILTON REVELLE



STUART WALKER'S Portmanteau Theatre! It's like Hamilton Revelle's Portmanteau Studio!" These remarks were made by a friend while visiting me in my room in Boston.

We had been discussing Walker, the Drama, and Lord Dunsany's plays. I was showing some visitors he had brought with him some of my photographic work, and some proofs of portraits that I had made the day before, of the speaker—a member of Mrs. Fiske's Company.

"But how on earth do you do such work while you are traveling?" asked a lady visitor, a friend of my "sitter" of the day before. "Oh," said he, before I could answer, "Revelle is known in the theatrical world as 'The Wizard of the Camera,' just as Belasco is known as 'The Wizard of the Stage;' he carries everything in that portmanteau," and he pointed to a large, nearly square compressed cane-fibre affair, that was bought in Italy for its strength and lightness.

I find my camera and the results obtained with it a great relaxation from my work in the theatre, and I have the honor to have photographed nearly all the well-known celebrities of the stage.

I began my photographic career indirectly, as it were. I was studying painting with my godfather, Mr. Hamilton Aidé, who was a well-known artist in England, and I often used to make excursions with him into the highways and byways of Old England, also abroad, and very often I had to finish a sketch from memory. One day he gave me a camera. It was a small, polished mahogany affair, made by Eastman, and it took one hundred pictures at one filling, a small circular picture, and I used to use this when I was leaving a place with a sketch unfinished. They were developed for me, and *as photographs* were weird and awful. The films were very thin, and used to curl up tight and looked like toothpicks.

Then, one day, I met an enthusiast on photography, and saw some of his work, and I became interested. I was working very hard, in those days, at my profession, and getting only a small salary; but I was determined to get myself a good camera, and "try out" things for myself.

One day, in Glasgow (I was playing in that city with Beerholm Tree), I saw in a photo-dealer's window a camera, and found on asking the price that it was 12 pounds (\$60). This meant a small fortune to me, in those days.

All through the week, I hankered for it. I used to go and look at it daily, then I had an inspiration. I had a valuable family-ring that

had been given to me by my mother. I went into the shop and saw the proprietor, a canny Scot, and made an arrangement with him to let me have the camera, leaving my ring as security. I was to send him one pound a week until it was paid for, when he would return me my ring. I left the shop with my precious camera in my possession, and with another pound's worth of dishes, developer, lamps, etc., and I began making pictures (?).

I photographed all the pretty girls in the company, and was furious with them when they would not accept the results of my efforts. I used to declare, angrily, that the camera could not lie!

Oh, those photographs; how funny they were! I have some of them in a book at home in England, and, although they are sadly faded, they are still a source of merriment! Beautiful Lily Hanbury, with a nose like a sausage and a hand seemingly growing out of her shoulder, like the man at Barnum and Bailey's circus! Julia Neilson as "Hypatia," apparently a *negress* with white hair! Lady Tree as "Ophelia," looking like "Topsy" in "Uncle Tom," and many others, equally funny. I thought them all wonderful, and reverently pasted them all into an album.

My first real thrill, photographically, which was three years after, was at an exhibition of the R. P. S. of Great Britain, when I went to the private view with my dear sister, and asked for a catalogue. I found to my joy that I had been awarded both the Gold and Bronze medals for two portraits that were hung on the line! They were studies of Bernard Partridge, the now famous cartoonist of *Punch*, as a French soldier of the sixteenth century, a part he was then playing at the Haymarket Theatre. He was known on the stage as "Bernard Gould." The other head was of Winifred Emery, a profile-study, which was published widely afterwards. I then became an enthusiast and a scalp-hunter, and sent my work to many exhibitions. The number of my medals and certificates began to grow. I switched from portraiture to landscape-work, and, while in Italy, devoted my time to that branch entirely.

My paraphernalia is of the simplest, and I carry as few things as possible. All my work is done with small cameras, my favorites being Richard's Verascope and Gaumont's Block Note, the latter being a tiny affair and really capable of being put into one's vest-pocket. Both cameras are fitted with Zeiss F/4.5 anastigmats



Courtesy of the Century Company

QUESTEMBERT, BRITTANY
HAMILTON REVELLE



THE ACCIDENT

HAMILTON REVELLE

which give exquisite definition and will enlarge up to 8 x 10 without loss of detail. 8 x 10 is the size I use almost exclusively.

Both cameras take plates, films, roll-films and film-pack; but I prefer plates, and all my developing is done by the tank-system. I carry two 8 x 10 dishes made of papier-maché, and use for developing the Eastman M. Q. tubes which can be bought anywhere and are easily carried. For my plate-tank, which holds twelve ounces, I use Eastman Brownie powders, and for fixing, the Eastman acid fixing-bath, so that no liquids, at all, are carried.

My tank is a foreign-made affair, and takes the Verascope and Block Note plates, and works perfectly. I have developed hundreds of negatives, and if I have a failure, it is due to over or under exposure—never to the fault of development. For portraiture, I cut down the amount of sulphite and carbonate to just half the amount in the red packet of the Brownie powders. I get a clear, thin negative with all detail. This is essential, as all my work is enlarged. For my

enlarger, I use the cheap Eastman enlarger, which is on the market at fifteen dollars. It may have gone up in price since I bought it; but that is what I paid for it. I employ a 75-watt gas-filled tungsten-lamp, which will just go into the lamp-holder, and this gives me brilliant illumination. The lens that comes with the machine I discarded, using in its place a Dallmeyer 5 B portrait-lens which works at F/3.5, and for portraiture I use it at full opening. If I desire soft-focus effects, I remove the back-combination, and this gives me all the diffusion I want, which can be sharpened by gradually stopping down.

This enlarger I have made to take all to pieces, by unscrewing the two solid rods, which go into the hollow tubes; these latter are made to take out. The machine then goes into a very small space, and folds quite flat for traveling. The light cone, being the only clumsy part, I pack full of M. Q. tubes and Brownie powders, wrapped in paper, which protects them and saves room, and also answers the purpose of keeping the metal cone from being dented.



Courtesy of the Century Company

OLD STREET, VENTIMIGLIA
HAMILTON REVELLE



THE FIRST RIDING-LESSON

HAMILTON REVELLE

My easel I have constructed myself. This also folds flat, and consists of a drawing-board 12 x 16, with a large screw fastened at the back of the board in the middle with a round piece of wood which grips in a slotted opening in the easel-support. I use an 8 x 10 printing-frame for my paper, with different masks if I want a smaller picture, or one with a border. The easel-board has a strip of wood at the bottom for the frame to rest on, and I have a spiral spring (which is a curtain-holder for the lower sash of a window, which I bought at the ten-cent store) made into a ring, and this goes around the easel-board and keeps the frame in position. The board and frame can be raised or lowered. They work perfectly. For a background, a large black focusing-cloth 8 x 8 feet is used. In a corner is a changing-bag so that I can fill my tank or plateholders without need of a darkroom.

My enlarging I do at night, when I return from the theatre, using the bath-tub for the washing of plates and prints. The next morning the prints are dry, and I either mount them as they are, spot them and deliver them the next day; or if I finish them by my own special process, then the sitter has to wait a week or sometimes longer. The "special" process is my own. I treat the bromide prints with certain chemicals, generally choosing a thick, buff, mat paper, and,

after dust it over with dry, fine charecoal, or other powdered color mixed with rosin. This adheres to the paper wherever there is a photographic image, can be made plucky or light at will, and any undesirable detail suppressed or any desirable detail accentuated.

The plates that accompany this article are all enlargements from my tiny Bloek Note or Verascope negatives, and were done in my own special process on hand-made paper, such as the Van Gelder, Miehle, and Watman—some in color and some in monochrome. They have been reproduced wonderfully well.

The picture of Kingdon Market was in color, and all the color-values have been well brought out. This particular picture was enlarged with the soft-focus lens, suppressing the ugly advertisement on the awning of the grocery-shop at the right.

For street-studies of this kind, the small camera has it "all over" its big brother. In the first place, it attracts no attention, and is always ready for action. My usual method is to "encadre" my picture; then, when the right moment comes, quickly put the camera to my eyes (both the Verascope and Bloek Note have direct-vision finders) and snap my subject. In the second place, the depth of focus of these little instruments is enormous, and I rarely use the

focusing-adjustment except, of course, for very near subjects or for portraiture. I do very little retouching in portraiture, as I try to get my effects by lighting. For a reflector in an hotel-room, I turn the dresser around and attach a towel with some push-pins to the back of the mirror-frame. One can swing the mirror to any desired degree.

Sometimes, I go to my real work-shop—the theatre, and get the electrician to give me two large 1000-watt lamps, with frosted centers, and I do my portraiture there.

During my stay in Boston, at the Hollis Street Theatre, I got some of the members of the company to do some real theatre-pictures for me. They put on the Mardi-gras costumes used in the second act of "Miss Nelly of N'Orleans," and we had great fun arranging some interesting "circus-studies" which appear with this article.

In my profession, I travel so much, and, being

a great walker, I have photographs of almost everything picturesque that I see during my journeyings. I had the good fortune to be in Italy for fifteen months. I was under a contract for the kinema with the famous firm of Ambrosio at Turin, and I had great opportunities for wonderful subjects at Naples, Rome, Florence, Milan, Turin, etc., and my camera went everywhere with me.

Next year, I hope to return to Italy to complete my contract with Ambrosio which was interrupted by the war. He has promised to send me to Sicily for two film-subjects, and that will, indeed, be a paradise for wonderful "salon" studies.

The *Century Magazine* expects to publish a head of Mrs. Fiske as Miss Nelly of N'Orleans. This was done in my studio, which is on the roof of my quaint apartment in Greenwich Village, in New York City.

How I Make My Bromoil-Prints

G. BELLAMY CLIFTON



At the outset of his demonstration, which was quite informal, Mr. Clifton said that he had nothing up his sleeve. He always tried to tell all he knew to those to whom he demonstrated, but he prefaced his demonstrations with a note of warning that the process was not for the many, but for the few. There were perhaps more difficulties and failures in this process than in any other. For one thing, many added difficulties that had arisen since the war, which, no doubt, were due to the gelatine used in the preparation of the bromide paper. There were more reversals than there used to be, and blistering was very common. There seemed to be no way, at the moment, to remedy these; but research-work was being carried out with this object.

There were various ways to make Bromoil-prints. He preferred, in the first place, to use Ilford papers and to get a very flat print. The developer he used was Amidol. Mr. Hector Murchison recommended:

Amidol.....	1 dr.
Sodium sulphite (10 per cent solution),	$\frac{1}{2}$ gr.
Water.....	1 oz.

and he could guarantee that that was quite good. He preferred Williams's bleacher, one bottle of

which would last him about twelve months, using it over and over again until it was exhausted; but he had also found Mr. Featherstone's formula, as set out below, quite satisfactory:

Copper sulphate.....	40 grs.
Sulphuric acid.....	$2\frac{1}{2}$ mms.
Potassium bromide.....	40 grs.
Chrome alum.....	8 grs.
Potassium bichromate...	$3\frac{1}{2}$ grs.
Water.....	10 ozs.

Dissolve in water at 90° F. Fix in 3 ounces hypo to 1 pint of water.

Mr. Clifton strongly urged the use of good brushes for pigmenting, recommending those made of polecat-hair. It was of no use at all to dabble about with shaving-brushes. He preferred a very hard pigment. It was possible to use powder colors and vine-charcoal, and he had produced very good results with Nixey's black-lead. All these must be mixed with some medium. A striking Bromoil-print made with Nixey's blacklead was exhibited after the demonstration.

Proceeding with the demonstration, Mr. Clifton showed how he used a moist blotting-paper pad on a plate-glass support, on which the print is laid during pigmenting, agreeing with a lady who was present that thin cotton-fabric might be



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YOUNG AMERICAN EAGLES

A. S. DOCKHAM

used, though he did not think it would retain the moisture so well or for sufficient length of time. He pointed out that the print should be dry when placed in the bleacher. After the bleacher had been poured over it, the image became very rapidly almost invisible. When the image was fully bleached out—which took two or three minutes—Mr. Clifton washed the print and gave it a fixing-bath—three-quarters ounces hypo to ten ounces of water, a strength recommended when using Williams's Bleacher, letting it remain in this bath for seven or eight minutes. Mixing the pigment, he pointed out that it should be used at the start, if possible, in its natural condition, being carefully thinned down afterwards, from time to time, as required with Roberson's medium or megilp, in order to obtain depth and brilliancy in the shadows and produce contrast. He advised the use of a good palette, such as a fire-tile, and of a strong palette-knife for spreading out the pigment. Having rinsed the print again and laid it on the wet blotting-paper support, he removed the surface-moisture from the print with a damp piece of linen. He then commenced inking up, dabbing gently with a

fair-sized brush, only the points of which were covered with the pigment. This process, and the equally important process of "hopping," was watched with the keenest interest as the image reappeared. The handling of the brush, especially in "hopping," needed considerable practice; but everyone adopted a method of his own, in time. He said that he used no mechanical appliances for "hopping." He did not advocate the "dragging" action of the brush, except in special cases. As the demonstration proceeded, Mr. Clifton found that the temperature of the room was not altogether favorable, as he was working near a large gas-fire, and was not astonished when a few minute blisters appeared on the gelatine. These, however—if they did not become too large or numerous—could be treated at a later stage, and the final touches could be put on when the print was dry. He showed how highlights were put in, and how cloud-effects might be procured with a piece of plastic rubber while the pigment was wet. For making corrections or modifications, when the print was dry, he used a "pen print-trimmer." He exhibited some remarkable examples of "con-



SUNDOWN

J. H. FIELD

trol" in Bromoil, all modifications being made on the prints only. These included an excellent picture from a Bromoil print which had been worked up in black chalk of a street-scene, the original negative having been supplied by the chairman. By this method of combined draughtsmanship and photography, Mr. Clifton said that some charming effects could be produced, especially with architectural subjects, and he considered the performance was quite legitimate. He warned those who thought of trying the process, that just at the present time many inexplicable difficulties constantly arose which would be most disheartening to a beginner, and that they should not attempt it unless they were prepared, under present conditions, to see many failures. Even the most skilful Bromoil workers had to put many of their efforts into the waste-basket.

In response to a hearty vote of thanks, Mr. Clifton said that he hoped some day to be able to

devote all his time to research-work in the Bromoil process. As was seen at that demonstration, blistering was one of the most trying faults at the present moment. The temperature in which one worked had undoubtedly much to do with success, and, if possible, it should be kept the same all the way through. He had found Ilford "Ordinary Rough" and "Bromona" papers the best for his particular method of working; but other workers preferred other makes and types. It was entirely a matter of taste and also which paper, by experience, best suited the individual worker. The essential thing was, having found a suitable paper, to stick to it, as there was then more chance to turn out satisfactory work, which after all was the aim of the Bromoil picture-maker.—*Report, from The Photographic Journal, of a demonstration delivered by Mr. G. Bellamy Clifton before the Royal Photographic Society.*



GRAIN ELEVATOR FIRE
BOSTON, JULY 30, 1902
H. A. LATIMER



EDITORIAL



Spiritism in Photography

IN letters to the Editor, correspondents seem to express astonishment that the publication in February PHOTO-ERA of his adventure with spirit-photography should follow closely upon newspaper-reports of spirit-photography in England. If they doubt the authenticity and priority of the Editor's experience, they are reminded of the fact that a brief account of the episode in question was published in PHOTO-ERA magazine about ten years ago!

The Editor is decidedly of the opinion that the alleged spirit-photographs by the well-advertised Hope, of Crewe, England, have their origin in photographic legerdemain. A mysterious feat of the famous prestidigitator, Kellar, known as the "Levitation," was thought by many persons to be supernatural in character, until several years later when it was explained. It was based entirely upon mechanical means. In reply to many inquiries about the Crewe spirit-photographs, the Editor would not insult the intelligence of his correspondents, and others equally interested, by explaining how they are produced. Any expert photographer understands how the thing is done. Like rappings, slate-writings and other alleged messages from the spirit-world, these spirit-photographs have no supernatural origin, whatever. Although they are childishly simple in their production, they impress the human mind to a degree corresponding to its susceptibility. So long as persons may be persuaded by misrepresentations—whether in financial enterprises, curative or restorative processes—just so long will they be deluded by apparitions in the form of materialized spirits and, latest of all, spirit-photographs. Indeed, if any amateur photographer wants to entertain his friends with spirit-images of departed friends, or, better still, of famous personages whose faces few living persons have ever beheld, he can resort to such simple means as pre-exposed plates, manual dexterity, and an ingenuous personality. The portraits need not be exact, for it is a well-known fact that no two painted portraits of an historical character are alike, unless they are replicas or good copies.

In this connection, the Editor recalls a collection of over one hundred portraits of Napoleon Bonaparte that forms a prominent feature in the

late John C. Ropes' *Napoleoniana*. Here we have accurate photographs of portraits of the great Napoleon from the time he took command of the Army of Italy to the time when his star set at the Battle of Waterloo. It is difficult to believe that of all the many portraits of this wonderful man no two are alike. Hence, the departed individual, whose face is not familiar to persons interested in spiritism, need not be pictured convincingly on the photographic plate. Even a faint suggestion will suffice. Indeed, in circumstances where the mind of the victim is exceedingly receptive, almost any sort of an impression will answer the purposes of the impostor, and the alleged spirit-photograph—preferably one of the nebulous kind—may be urged to represent William E. Gladstone, John Bright, George Washington, or, if you please, a deceased soldier of the Great War, according to the fancy of the operator and the gullibility of the victim. If any one still thinks that our English cousins are slow, let him consider that the cables had scarcely cooled after they had transmitted the thrilling reports of spirit-activity by the simple-minded carpenter of Crewe, when, lo! the aged Sir Oliver Lodge appeared in this country, eager to reap—as he has, in fact—the immense pecuniary benefits which, as the direct result of advance and widespread publicity, awaited the enterprising opportunist. First come, first served!



WITHOUT regard to the actual merits of a portrait of diffused definition, it is interesting to observe that many artistic effects in motion-picture work are now on that order. They seem to have no *raison d'être*, unless there be an effort to recognize the importance of diffusion in the photographic image, or to produce certain artistic effects. If there were a popular demand for softness of outline in general cinematography, we should soon see an entire film-play made with a soft-focus lens; but it may be stated with a reasonable degree of certainty that kinema (motion-picture) audiences prefer clear, sharp pictures seen easily by any one gifted with normal vision. Occasionally, still-pictures of portraits of film-stars for advertising-purposes are also made with obscured outlines and detail.



ADVANCED COMPETITION



Closing the last day of every month
Address all prints to PHOTO-ERA, Advanced Competition
367 Boylston Street, Boston, U. S. A.

Prizes

First Prize: Value \$10.00.

Second Prize: Value \$5.00.

Third Prize: Value \$2.50.

Honorable Mention: Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

Prizes may be chosen by the winner, and will be awarded in photographic materials sold by any dealer or manufacturer who advertises in PHOTO-ERA, or in books. If preferred, the winner of a first prize may have a solid silver cup, of artistic design, suitably engraved.



Rules

1. This competition is free and open to photographers of ability and in good standing—amateur or professional.

2. *No more than two subjects may be entered, but they must represent, throughout, the personal, unaided work of competitors. Remember that subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era awards are announced.* Prints on rough or linen-finish surface are not suitable for reproduction, and should be accompanied by smooth prints on P. O. P., or developing-paper having the same gradations and detail. All prints should be mounted on stiff boards.

3. *Unsuccessful prints will be returned only when return-postage at the rate of one cent for each two ounces or fraction is sent with the data.*

4. *Each print entered must bear the maker's name and address, the title of the picture and name and month of competition, and should be accompanied by a letter, SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks will be sent upon request. Be sure to state on the back of every print exactly for what competition it is intended.*

5. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. However, this does not prevent the photographer from disposing of other prints from such negatives after he shall have received official recognition.

6. Competitors are requested not to send prints whose mounts exceed about 11 x 14 inches, unless they are packed with double thicknesses of **stiff** corrugated board, not the flexible kind—or with thin wood-veneer. Large packages may be sent by express.

7. Competitors who have won three first prizes within a twelve-month, become ineligible for two years thereafter. The too frequent capture of the first prize by one and the same competitor tends to discourage other participants and to make the competitions appear one-sided and monotonous.

Awards—Indoor-Genre Competition

Closed December 31, 1919

Second Prize: Guy E. Osborne.

Third Prize: Thomas Elsum.

Honorable Mention: Beatrice B. Bell; Joseph Bonanno; R. A. Buchanan; L. E. Cattell; Alice M. Clark; Alvah G. Clark; R. L. Cline; Maude Lee Eldredge; Thomas Farmer; Harry Footner; G. W. French; W. S. Lee; Guy Lowell; Alexander Murray; G. A. Perley; Corey Poest; J. Herbert Saunders; James Thomson.

Subjects for Competition—1920

"Twilight-Pictures." Closed January 31.

"Still-Life." Closes February 28.

"Nature-Studies." Closes March 31.

"Rainy-Day Pictures." Closes April 30.

"Miscellaneous." Closes May 31.

"Speed-Pictures." Closes June 30.

"Rural Scenes." Closes July 31.

"Shore-Scenes." Closes August 31.

"Outdoor-Genres." Closes September 30.

"Architectural Subjects." Closes October 31.

"Domestic Pets." Closes November 30.

"Indoor-Genres." Closes December 31



Photo-Era Prize-Cup

IN deference to the wishes of prize-winners, the Publisher will give them the choice of photographic supplies to the full amount of the First Prize (\$10.00), or a solid silver cup, of artistic and original design, suitably inscribed, as shown in the accompanying illustration.

Competitors Must Mind the Rules

COMPETITORS, in the Advanced Workers' and Beginners' Competitions, continue to ignore some of the rules, one of which is that the name and address of sender, also name, month and kind of competition must be written plainly on the back of each print. Otherwise, how is the jury to know? Besides, the Editors are too busy with other matters to stop to write to the careless competitor for missing information.

This is often the reason why careless entrants wonder what has become of their prints. Let them be more careful in the future. We will do our part if they will do theirs.



MEETING A NECESSITY

GUY E. OSBORNE

SECOND PRIZE—INDOOR-GENRES

Pictures that Lie Close at Hand

OUR cotemporary *The Amateur Photographer* points out an incident in the life of Thoreau which applies to modern photographers.

Thoreau, as he grew older, became convinced that the finest scenery in the world could be equaled in his own district, and even the reading of a volume on Arctic scenery only drew from him the remark that almost all the phenomena there described could be observed in Concord. One does not wish to apply such a statement too literally, yet there is just enough truth in it to make one desire its recognition.

We are apt to travel over large areas in search of beautiful subjects, forgetting that many spots, quite as beautiful, may possibly exist in our own village, or within a few miles of our homes. In almost every district, however commonplace it may appear, there will be a stream with trees and fields, and it is certain there must be a few favorable spots which we could visit at times most suitable to ourselves.

Many a photographer has the misfortune to be connected with a business which keeps him employed in, and confined to, the one building from nine in the morning until seven or eight in the evening. He would, in this way, lose the finest opportunities for his photography, if he depended upon visiting distant scenes. By taking advantage of the neighboring stream, he can catch the early morning October mists without any serious neglect of his business; he can watch the varying moods of the weather and the changes of the seasons; and, in the few minutes before business, he can often obtain his best picture.

Even in our less favorable districts we can observe the same sun setting, the same beautiful shadows and reflections and glowing colors, similar cloud-forms may be seen by ourselves as by those in distant parts; and it only needs an earnest sympathetic spirit, eager to learn of nature, in order to find in our own Concord the centers of beauty which travelers find elsewhere.

One ought, in fairness, to add the tantalizing possibility that the finest views are usually to be found at the most impossible point in the stream. One can easily picture the ardent student of nature, precariously perched on a slimy stone in mid-stream, quite unconscious of the fine snapshot he, himself, would provide for an observant onlooker. One is also frequently awakened to the fact that the sluggish stream is quite knee-deep, where only a few inches of water appear to cover the rocks.

White Margins

It is often necessary to produce prints having a white margin which may be as narrow as one-eighth of an inch or several inches in width, as the class of work may demand. Unless there is some system of preparation, says *The British Journal*, a good deal of time is lost in improvising and fixing masks and, unless these are properly secured, there is always a risk of spoiling good paper. A plan which we have found to work well, is to keep a special printing-frame for the purpose with a good sheet of clear glass in it. This frame must, of course, be as large as the largest paper to be used; if the subject is not well centered upon the



"A PENNY FOR YOUR THOUGHTS"

THOMAS ELSUM

THIRD PRIZE—INDOOR-GENRES

plate, it must be larger. The next step is to provide several cards not thicker than the negative-glass, and to cut out openings into which the plate will exactly fit. Around the margins of these openings are fastened strips of passepartout-binding overlapping the edges so as to give the desired width of margin. All that has now to be done is to drop the negative into the frame, and, when the print is not larger than the plate, to lay the paper so as to correspond with the edges of the plate. For larger sizes, register-marks made of the same binding-strips should be stuck on the card, so that the margins may all be uniform in width and square with the subject. If the subject has to be in an oval or circle, this must be cut out of black or red paper and pasted in the card-frame instead of the strips. If a dozen or so of these frames are made for each sized negative with different openings, any negative may be fitted in a few moments.

On Buying a Camera

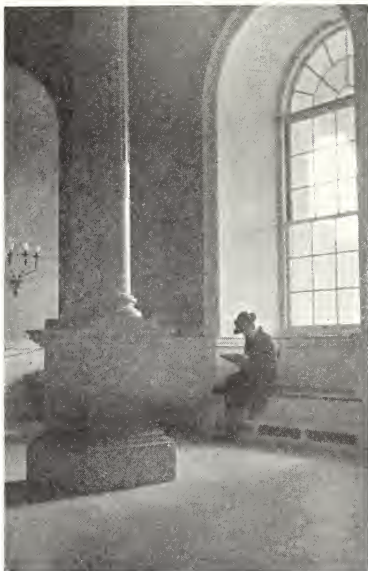
If the amateur has not already bought a camera and really wants to learn something about photography and *not* be simply a snapshotter, working blindly, I

would advance the following suggestions for his consideration.

He should not buy a roll-film camera. This type of camera is for the amateur who does not really wish to learn the rudiments of photography or for the advanced amateur or professional who has mastered the art and who requires the portability and compactness of a roll-film outfit and knows how to use it.

In my opinion the beginner should buy a small plate-camera and learn to focus it by means of the ground-glass. If possible, he should get one that has a detachable lens-board so that different lenses may be used and their characteristics noted. I began my camera-career in the wrong way. I bought a Vest-Pocket Kodak; also an Illuminator and Enlarger to be used with electricity. When I moved from the West to Brooklyn, N.Y., I had nothing but gas! I never learned much about photography until I bought a No. 9 Premo. I do not advise this camera—excellent as it is—because of its weight and bulk. Unfortunately, our American camera-manufacturers are far behind foreign competitors in the development of compact plate-cameras.

The $3\frac{1}{4} \times 4\frac{1}{4}$ size is good; but 4×5 should be the



A PEACEFUL READER

JOSEPH BONANNO

HONORABLE MENTION — INDOOR-GENRES

limit. I do not advise the 3A or postcard size. Read "Simplified Photography" by Charles F. Rice—*Photo-Miniature*—I agree with him. The long narrow shape is not so well adapted to general requirements as the squarer sizes.

The beginner should give up thoughts of enlarging his negatives unless he has electricity in the house or is willing to use daylight. Again, our camera-manufacturers fall behind in the production of enlarging-outfits for incandescent gas. In England there are several excellent outfits to be used with gas—we should have them here as well.

Avoid purchasing a camera with a long bellows-extension. The draw should be sufficient to admit a lens of at least the diagonal of the plate—if possible, a size or two larger.

If possible, obtain a camera with a focusing-screen. Few of our American cameras have this convenience; but nearly all foreign cameras are so equipped. This screen gives sufficient protection in most cases to enable the camerist to focus without using a focusing-cloth or a tripod. The Speed Graphic—probably the best American plate-camera on the market—has such a screen. It is a camera used by press-photographers. I have watched them work. They focus on the ground-glass; wind up the shutter; set the stop; slip in the plateholder; draw the slide; locate the picture by

means of that direct-view finder—which, by the way, is not in a line with the lens—press the release; replace the slide; and draw out the plateholder. It is done very quickly. However, this is an expensive camera. The press photographers use large anastigmat lenses, usually about two sizes larger than the lens-makers list for the size of plate. One old veteran photographer with whom I talked was using an 8 $\frac{1}{4}$ -inch lens on a 4 x 5 plate. He said, "I get a better picture," and so he did! As a rule, press-photographers use a 5 x 7 camera; but this is too heavy and too large for the amateur to begin with. It is best for the beginner to get the smallest, lightest and most compact camera that will give him a contact print which will be of satisfactory size. That is why I suggested 3 $\frac{1}{4}$ x 4 $\frac{1}{4}$. The popular 2 $\frac{1}{4}$ x 3 $\frac{1}{4}$ is too small for me. When I advocate a plate-camera I do not mean that the amateur must use plates. He can use film-packs or portrait-film. I use a 4 x 5 portrait-film in a 5 x 7 Seneca by means of a kit and a piece of glass to hold the film down. It works nicely. I do not think that the Eastman Kodak Company makes a small film-sheath as yet, but will probably do so in the future. In the meantime the amateur can get a tinsmith to make some as explained by H. A. Staples in the "Photographie Thrift" column of May, 1919, PHOTO-ERA.

G. A. SMITH.



SUBJECT FOR NEXT COMPETITION ADVANCED WORKERS



FISHING-WEATHER

GEORGE W. FRENCH

Advanced Competition—Rainy-Day Pictures Closes April 30, 1920

THOSE workers who read the interesting article, "Fog-Photography," by Beatrice B. Bell, in July, 1919, PHOTO-ERA, will be in a position to appreciate the many excellent subjects that may be found on a rainy day. However, at the outset, let me caution prospective contestants to avoid the wet-pavement-people-with-umbrellas-up sort of rainy-day theme that is now worn threadbare. The picture on this page is a good example of the kind of rainy-day picture that will be welcomed in preference to one of a more hackneyed theme.

It is obvious that a rainy-day picture is one made in the rain or under weather-conditions just following a heavy rain or shower. Whether in the city, country

or at the seashore, beautiful and unusual effects may be obtained by the skilled and observant camerist. Of first importance is the adequate protection of the photo-equipment from moisture, as the lens, shutter, bellows and all metal parts of a camera may be impaired if exposed too long to inclement weather. Particular care should be taken if pictures are made on or near salt-water. The use of an ordinary hand-camera enables the camerist to make exposures with comparative ease from beneath an umbrella, raincoat or tarpaulin. With regard to the larger cameras on a tripod, more elaborate protection must be improvised to suit each individual subject. Often, exposures may be made from a house, barn, pier or tent. So long as the camera is protected effectually, the means employed is virtually immaterial and is governed entirely by the resourcefulness of the camerist. A lens-cap is indis-

pensable, particularly if exposures are to be made near salt-water. Flying spray is a source of danger to the lens, unless due precautions are taken immediately before and after releasing the shutter.

Beautiful pictorial effects may be obtained along riverbanks, the shores of lakes and the seacoast. Often, ships at anchor add immensely to the general effect because of the reflections their spars and sails cast on the water. Docks, piers and landings offer other suitable subjects. Ferry-slips, showing a ferry arriving or departing crowded with commuters on their way to work, have many possibilities.

A rainy day in the mountains is one that the intelligent camerist should utilize to his advantage. The cloud-effects obtainable in the valleys and uplands, with here and there a rift in the clouds to heighten the effect, is material enough for a day's camera-work. Moreover, a mountain-lake is an excellent accessory if one can be found to fit suitably into the composition. It is essential that there be no doubt that it is wet weather. To portray distant hills shrouded in mist must be done carefully, lest it appear that the hills are merely hidden by an early morning-fog. A bit of road dotted with mud-puddles; a farmer trudging along, protecting himself as best he can from the rain; a horse and buggy splashing along, the rain beating down on the raised top—in fact, any person or object that is receiving a wetting should be employed whenever possible to make the rainy-day picture truly convincing.

Bits of farm-life, in the course of a rainy day, offer excellent subjects. On most farms there are certain "chores" that are done when weather-conditions make work in the fields impossible. Chopping wood; sharpening scythe-blades, axes, sickles, etc.; mending harness; greasing axles and other work that is usually done in an open shed or near an open barn-door may be photographed with enough foreground to prove that it is raining outside. The observant camerist will find many other appropriate subjects in and around the farm. Not only is he in a position to obtain a good rainy-day subject, but he may chance upon an indoor-scene that will prove to be a masterpiece.

Photographing through a store-window is a feasible and comfortable way to obtain many excellent subjects. Passersby who linger a moment to look into the window make good subjects if they are selected with care. Street-scenes with traffic may also be obtained in this manner. This method has the advantage that the camera is well-protected. Slight diffusion may be caused by the plate-glass window; but on a rainy day most objects are slightly diffused and this is no serious drawback. However, diffusion and distortion are not the same thing, and care should be taken to see that the plate-glass window does not distort the subject. Those camerists who are equipped with small pocket-cameras are in a position to obtain many original rainy-day pictures from automobiles, street-cars, motor-buses or wagons that are moving along with the traffic. From such points of vantage, it is possible to catch many bits of city-life that are beyond the reach of the camerist on the sidewalk. Moreover, city-traffic is a study in itself and particularly so in inclement weather.

Modern high-speed lenses enable the camerist to undertake rainy-day subjects with greater certainty of success than ever before. One has but to note the marvelous effects obtained in present-day motion-picture photography. Virtually no weather-condition prevents the motion-picture cameraman from obtaining technically and artistically excellent results. This success is due solely to the modern high-speed anastigmat lens. However, even those camerists who still use the older types of lenses need not hesitate to make the

attempt, for there are rainy-day subjects well within reach of their lenses. It is not so much the equipment as the ability to use it to advantage that ensures success in making rainy-day pictures. A moderate priced box-camera may yield as satisfactory a result as a more expensive outfit provided that the camerist knows the capabilities and limits of his instrument. Naturally, a mastery of the principles that control the accurate use of the lens and shutter with regard to exposure should be part of the worker's preparation for this competition. He will find that it will be time well spent to obtain this information. The judges are well acquainted with the difficulties involved and these will be taken into due consideration.

The technical equipment needed for successful rainy-day pictures includes a good exposure-meter—provided that the worker has had little experience in this branch of photography—a high-speed anastigmat, if possible, but at least a rapid rectilinear lens and a camera that dampness will not affect. Some of the cheaper grades of cameras are made of combined cardboard, wood and imitation-leather held together by glue. These instruments serve admirably in fair weather; but prolonged exposure to dampness or an actual wetting may render them useless. Of course, no matter how well a camera may be made or adapted to inclement weather, the camerist should protect his outfit in every way possible. It is amazing, sometimes, how much rough usage a camera will stand without in any way having its serviceability impaired. Then, again, a very little thing may put the best camera out of order. The responsibility of uniformly good results—technically and artistically—rests with the camerist and it is for him to be master of his equipment.

This year we hope that workers will profit by George W. French's example and seek rainy-day subjects in the country, at the seashore—anywhere in fact, so long as a wet pavement, a cab-stand, public-square or other hackneyed theme is omitted. It must be admitted that reflections on wet surfaces offer many unusual forms of pictorial material and for this reason workers are drawn to this form of rainy-day picture. In the past two competitions devoted to rainy-day subjects, a few workers attempted to combine artificial illumination with falling rain, and the results promised well, but they fell short of being up to standard. We hope that contestants will make other attempts to obtain such original themes. In every competition there is a tendency for workers to follow the beaten path of theme, treatment and technical manipulation. It would seem that the time had come to get out of the rut and strive for originality. Remember that simple little things often give an old theme a new interest! Many workers try too hard to obtain originality and others do not strive hard enough. There is a happy middle course which it will pay the camerist to study and to follow with due regard to his artistic and photographic equipment.

Let me repeat that this year we hope that contestants will avoid the hackneyed rainy-day themes and contribute original ones. It will make the competition of greater value to each worker and add greatly to the pleasure of readers, subscribers and judges. Interest continues to grow in these monthly competitions and we hope that there will be a large number of pictures submitted. We are pleased to note that our many readers and subscribers appreciate the educational value of these monthly competitions. Moreover, whether a contestant wins a prize or not, he has the satisfaction of knowing that in the preparation of his picture he has gained artistic and technical knowledge.

A. H. B.



BEGINNERS' COMPETITION



Closing the last day of every month
Address all prints to PHOTO-ERA, Beginners' Competition
367 Boylston Street, Boston, Mass., U. S. A.

Prizes

First Prize: Value, \$2.50.

Second Prize: Value, \$1.50.

Honorable Mention: Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given *Honorable Mention*.



Subject for each contest is "*Miscellaneous*"; but original themes are preferred.

Prizes, chosen by the winner, will be awarded in photographic materials, sold by any dealer or manufacturer who advertises in PHOTO-ERA, or in books.

Rules

1. This competition is open only to beginners of not more than **two** years' practical camera-activity, and whose work submitted here, is **without any practical help from friend or professional expert**. A signed statement to this effect should accompany the data.

2. Workers are eligible so long as they have not won a first prize in this competition. Winners of the first prize automatically drop out permanently, but may enter prints in the Advanced Class at any time.

3. Prints eligible are contact-prints from $2\frac{1}{4} \times 3\frac{3}{4}$ to and including $8\frac{1}{4} \times 5\frac{1}{2}$ inches, and enlargements up to and including 8×10 inches.

4. Prints representing **no more than two different subjects**, for any one competition, and printed in any medium except blue-print, may be entered. They should be simply and tastefully mounted. **Subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era awards are announced.** Prints on rough or linen-finish surface paper are not suitable for reproduction, and should be accompanied by smooth prints on P.O.P., or developing-paper having the same gradations and detail.

5. *Unsuccessful prints will be returned only when return-postage at the rate of one cent for each two ounces or fraction is sent with the data.* **Criticism on request.**

6. Prints receiving prizes or *Honorable Mention* become the property of PHOTO-ERA, unless otherwise requested by the contestant. However, he may dispose of other prints from such negatives after he shall have received official recognition.

7. *Each print entered must bear the maker's name, address, instructions, the title of the picture and the name and month of the competition, and should be accompanied by a letter, SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type, and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks will be sent upon request. Be sure to state on the back of every print for what contest it is intended.*

8. Competitors are requested not to send prints whose mounts exceed about 11×14 inches, unless they are packed with double thicknesses of **stiff corrugated board**—not the flexible kind, or with thin wood-vener. Large packages may be sent by express.

Awards—Beginners' Competition Closed December 31, 1919

First Prize: F. H. Rodgers.

Second Prize: Bernice Krouse.

Honorable Mention: Charles F. Adams.

The Beginner and Many Cameras

THE article, "Keep that Camera!" by C. B. Weed, in February PHOTO-ERA, pointed a moral if it did not adorn a tale. It was particularly applicable to the beginner and the springtime of the year when camera-neophytes prepare themselves to conquer new photographic worlds. If the preceding year's activities have resulted in failure, the beginner is very apt to condemn his equipment and to believe that an entirely new outfit will solve his photographic difficulties.

There is an old saying to the effect that the quickest way to meet a difficulty is to go through it. This is precisely the suggestion I would give the beginner who believes that repeated changes of photographic equipment will bring success. I am very sure that in my school-days I would have made little progress had my teacher suggested a new study every time that I failed to pass an examination. Before I was permitted to advance, I had "to make good" in the study that I failed in—this was the "law and the prophets" in those days. I left no deadwood behind me; and, when I did advance, it was with a clean slate. Hence, to give a beginner a new camera because he has failed with the outfit he has been using, does not appear, to me, to be the ideal solution of the problem.

Let us assume that a beginner has had fair success with a $2\frac{1}{4} \times 3\frac{3}{4}$ folding-camera equipped with a meniscus-achromatic or single lens. However, he is dissatisfied and—as often happens—blames his equipment. Without tracing the difficulty to the right source, he buys a new $3\frac{1}{4} \times 4\frac{1}{4}$ outfit equipped with a rapid rectilinear or anastigmat lens and begins all over again, only to find that his new venture brings him no nearer success. Again, he blames the equipment instead of himself. This procedure may be repeated indefinitely until the beginner either consigns all things photographic to the ash-barrel or by mere chance becomes a successful amateur photographer.

It should not be necessary for me to go into detail with regard to the utter fallacy of believing that a repeated change of photographic equipment is the shortest road to the making of good pictures. On the other hand, I do not wish to be misunderstood as advising the use of only one camera. My conviction based on practical experience is that the mastery of one camera at a time is the surest way to attain thorough photographic knowledge. The beginner who can make a good picture with an ordinary box-camera is ready to advance to a folding one equipped with a better lens; and, when he has mastered this, he should be well prepared to use the more complicated *de luxe* or reflecting-cameras. It should be obvious that to omit the intermediate steps of preparation is to court failure. And, yet, how many beginners attempt to force open the door of photographic success by the jimmy



NOVEMBER

FIRST PRIZE—BEGINNERS' COMPETITION

F. H. RODGERS

of an expensive outfit that they cannot manipulate intelligently!

How much better it is for the tyro to "make haste slowly"—to decide at the outset that he will look within before he looks without for causes of failure. The principles of optics, stops, exposure, developing, printing and enlarging may be learned by using a simple box-camera. It is not necessary to own an expensive outfit. However, if the principles of photography are mastered by means of a moderate-priced camera, the beginner is in a position to advance rapidly in each successive step because he *knows* what he is doing, and *why*.

When the beginner has advanced successfully to the point where he can use most standard hand-cameras, he is in a position to select one or more equipments that will meet his needs. In such a case, I believe that several cameras equipped for special work, such as speed-pictures, portraits, soft-focals landscapes or genres may become of much practical value to the *amateur photographer*, for he is a beginner no longer. One of the new 4 x 5 view-cameras put on the market recently, should be included by the camerist who can afford it. This outfit is ideally adapted to several branches of photography, as it is fitted with a long bellows-extension, large, roomy front-board and strongly made. A reflecting-camera that is not too heavy and bulky is an excellent addition to the general equipment. Obviously, such a camera is best adapted to speed-photography. Another very effective camera to have is one of the small, compact vest-pocket in-

struments equipped with an anastigmat lens and high-grade between-the-lens shutter.

There is no lens or camera that will meet every photographic requirement, and the beginner who must limit his expenditures should select an outfit that has the widest possible range. What this equipment should be is for the beginner himself to decide, and how is he to determine this important matter, unless he has had practical experience? No doubt, it is evident to the reader that the one-camera method is best for the neophyte until he can stand on his photographic feet. However, as soon as he is able, financially and otherwise, to use two or more cameras to advantage, let him do so, by all means. Nothing increases the pleasure of photography more than variety of equipment and subject; but, at the same time, nothing tends more to scattered interest unless the camerist is practical, systematic and eager to advance along definite lines.

After all is said and done, it is the individual beginner who must decide how and when to increase his equipment. However, with the aid of camera-clubs and a reliable photographic magazine he should be able to determine whether or not he has "made good" with the camera he may have at the time. Common sense will tell him that the possession of three cameras will do him no good, unless he is proficient in the use of one. As I have said many times, photography is an art and a science, and even a beginner should understand the significance of this important fact.

A. H. B.



ROLLING WAVES

BERNICE KROUSE

SECOND PRIZE—BEGINNERS' COMPETITION

The Lens-Stop

BEGINNERS are often puzzled by the various markings on camera-shutters and lenses. A writer in *Kodakery* has attempted to clear up the matter for the beginner and this contribution is of much practical help to every owner of a camera.

Photographic lenses are fitted with stops of various sizes. These stops, which are also known as diaphragms, are used to regulate the amount of light that passes through the lens. A large stop will allow more light to pass through the lens than a small one, just as a large window allows more light to enter a room than a small window does.

The exposure needed to obtain a correctly timed negative depends on the intensity or brilliancy of the light that reaches the film, and since the size of the stop affects the volume of the light that passes through the lens it is important for the photographer to know the relative exposure-values of the stops with which his lens is fitted.

There are two systems of marking lens-stops: The U. S. (Uniform System) is ordinarily used on rectilinear lenses, and its markings are based on the relation between the *area* of the stop and the focal length of the lens, and the F/-system is in virtually universal use on anastigmat lenses, and its markings are based on the relation between the *diameter* of the effective stop-opening and the focal length of the lens.

Different numerals are used to express the relative values of the stops in these two systems, but in both systems all stops that bear a higher number than U.S.4 or F/8 admit just half as much light as the next lower numbered stop. This means that for all higher numbers of stops the exposure must be doubled when the stop-indicator is moved from any one stop-number to the next higher number and must be halved when the indicator is moved from any stop-number to the

next lower number. To illustrate: should the correct exposure be $1/25$ of a second through stop 16 it would be $1/50$ of a second through stop U.S.8 or F/11, and $1/12$ of a second through stop U.S.32 or F/22.

The numerals used to mark the stops in the U.S. and F/-systems are listed in the first two columns of the accompanying table.

In the third column the values of these stops are compared with the exposure-value of F/8 (U.S.4) which is the largest stop on rectilinear lenses.

The last column translates these values into actual exposure fractions, taking $1/25$ of a second through stop 16—the usual exposure for ordinary landscape-subjects in sunlight—as a standard.

Lens-stops that are marked 4.5, 5.6, 6.3 and 7.7 are only used on anastigmats.

No photographic shutter has all the speed-markings listed in the last column; but the correct exposure can always be given by using the stop that the available shutter-speed calls for, and, if $1/10$ should be used in place of $1/12$, $1/5$ in place of $1/6$ or $1/2$ in place of $1/3$ the latitude of the film will take care of the slight error.

COMPARATIVE STOP VALUES

F/	U.S.	Exposure- Value	Comparative Exposures
4.5	1.25	.3	1/330
5.6	2	.5	1/200
6.3	2.5	.6	1/160
7.7	3.7	.9	1/110
8	4	1	1/100
11	8	2	1/50
16	16	4	1/25
22	32	8	1/12
32	64	16	1/6
45	128	32	1/3



THE CRUCIBLE

A MONTHLY DIGEST OF PHOTO-TECHNICAL FACTS

Edited by A. H. BEARDSLEY



A Call for Practical Articles

The editor of this department believes that there are many readers of PHOTO-ERA who will be glad to co-operate with him to make The Crucible an eminently helpful department and to widen its scope. To this end, we will offer each month a three-month subscription to any reader who contributes the most practical and helpful article of not more than three hundred words. We are specially desirous to receive items that are new, technical and of scientific value. Contributions, other than the winning article, that possess sufficient merit will be published with full credit to the author. It is not necessary that contributions be of special literary merit, as the editor will edit—when necessary—all material submitted to this department. Although items of technical interest are desired, we do not desire articles that involve highly scientific chemical and technical formulæ or to discuss subjects in language that is incomprehensible to the average amateur or professional photographer. In short, it is the editor's aim to make this department *unusually* interesting and to avoid "dry-as-dust" articles that would interest only the trained chemist or physicist. The hearty co-operation of every reader of PHOTO-ERA is asked in order that we may make this department of exceptional practical value and interest at the very outset.

That Phenomenal Mirror-Photograph

EDITOR OF PHOTO-ERA MAGAZINE:

I chanced to see an article in December, 1919, PHOTO-ERA, "A Phenomenal Mirror-Photograph," and am glad you printed same, inasmuch, as this has been a pet idea of mine for several years. I have explained several times my views of the possibility of this problem to friends, but they always looked at me as if I belonged to the Fourth Dimension and Perpetual Motion cranks. I have believed for some time that the ideal photograph of the future would not depend on chemical action by light at all, but would be made by optical induction on a smooth metallic plate like silver or aluminum. This conclusion was based on the present Electron Theory of Light, Heat and Electricity, which explains in the most satisfactory way of any theory, the various electrical phenomena. According to this theory, the outer orbits or rings of electrons surrounding the atom nucleus, absorb the different wave-lengths of light by induction, and generate a new wave, or waves of almost the same intensity and frequency, the combined waves forming an image of the object in mirror, with all shades of color as an electron will vibrate in unison with any wave-length. Now, if the electrons that form this image could be screened from the internal forces of the controlling atom, they should retain their fixed positions, responding only to the waves of light their new arrangement was tuned to by the record object. This fixing of the electrons might be accomplished by the aid of an outside electric force, and the addition of a small quantity of some other element to the metallic plate to neutralize or stabilize the atomic structure. To make this clearer, I will offer the following analogy as a parallel case. A coil of copper wire known as a

solenoid, or a piece of soft iron, has all the properties of a permanent magnet, when a current of electricity flows in the coil or around the iron. But steel with a small quantity of carbon will fix the electron-orbits and maintain the magnetism against the internal forces of the atom. If the mirror-image your correspondent mentioned was a reality, it must have been recorded by induction, as lightning has tremendous inductive effects and practically no chemical action.

FRED TATE.

To Overcome Spots in Negative

DOUBTLESS, many other amateurs have felt the uselessness of trying to retouch a negative that has a great many clear spots in the sky. Some time ago a vacation-negative—impossible to make over—was brought to me for enlarging. A contact print was made first, and some thirty or forty black spots "adorned" the sky which was an even pale gray. A few spots in a tree at one side of the picture and some in the rolling waves were easily disposed of; then a sample print was made, by contact. The sample print was cut on the horizon-line—being of water it was straight—and then cut about the tree. The top half, or sky, was held in place, while an enlargement was made. It was found that the edge of the cut paper made a line on the print. This line was eliminated by using a piece of absorbent cotton moistened in bleaching-solution such as is used in the sulphide-toning process. This left the sky free of specks, clear white, in fact. Then several subsequent enlargements were made in the same way. After development, but before fixing, the sky was fogged slightly. Then, after fixing, or at any time later, the cotton with bleaching-solution was used to obliterate the line around the tree, and to change the dull, gray sky into light and dark areas, giving it a cloudy look, much more pleasing than a clear white or an even gray. If too much is bleached out, it may be redeveloped with cotton, wet with developer and diluted with water. This method can be used in one way or the other until the desired effect is produced. Prints should be washed thoroughly afterwards. In case the bleaching is not done until after the prints have been washed and dried, they should be soaked a few minutes before bleaching them.

GILMAN LANE.

Old Hypo Fixing-Baths

IN Mr. Greene's article on a small finishing-plant, we find these words: "Theoretically, the amount of silver which could be recovered from a tank filled with exhausted hypo, would be worth some trouble; the fact that the tank must be used every day and the silver has to be precipitated as a sulphide makes me doubt the advisability of bothering with it."

Now, practically recovering the silver from old hypo baths is one of the simplest processes in photography, and may be of great value where a large trade is done.

In my own small practice, I simply take an old fixing-bath, pour it into a wide-mouth bottle or basin, and place a strip of zinc into the solution, suspended by a bend at the end of the strip. This is left for a few

days, and then the clear liquor is poured off and the thick residue filtered. The zinc is clean-scraped before putting into the next bath. This season I gathered eleven and one-half ounces, for which the Sheffield Smelting Co. sent me 19s. 2d.

What I would impress on Mr. Greene and our assistants is to take care of your old fixing-baths. If you are using plates, film and paper by the thousands, you may gather a ten-pound note by the end of the year.

HENRY HOLMAN, in *The British Journal*.

Fixing in Thirty Seconds

At a meeting of the Royal College of Science Chemical Society on Friday last, November 28, at South Kensington, Mr. K. Hickman gave a lecture on "Photographic Pastimes from the Chemist's View-point."

The lecture—as reported in the "Times"—opened with a demonstration in flashlight-photography. A "snap" of the audience was made, and also a photograph of the chairman. The plates were then given a rapid development with a lightning wash; fixation in a fixing-solution, effective in thirty seconds, recently discovered by the lecturer; a further washing for two minutes, in which time the hypo was removed by dilute permanganate; a bath for two minutes in formaline-solution, after which the plate was rinsed, dried in a stream of hot air from a machine of the lecturer's design; and finally printed on a lantern-plate. Thus, within half an hour of the exposure a lantern-slide photograph of the chairman was projected on the screen.

Later, Mr. Hickman dealt with the screen-plate method of color-photography, which, he said, by its simplicity and the beauty of its productions had ousted all other methods for amateur-work. The lecturer projected many examples of slides made by the Paget process,—flower and scenic studies, and portraits.

Reducing Prints on Gaslight Paper

PERHAPS we may permit ourselves to supplement a remark of one of our contributors, recently, adds *The British Journal*, editorially, to the effect that he was unable to recommend any preparation or formula for reducing the depth of gold-toned printing-out paper prints which had been printed too dark. In our experience the persulphate reducer is one which works excellently for this purpose. If our contributor's view is that no reducer can be used on an over-printed toned printing-out paper print without affecting its color, then we are bound to agree with him, but at the same time the persulphate reducer, although readily effecting the required reduction in depth, alters the color of the print rather favorably than otherwise. It is some years now since we used it, but we still clearly recollect the excellent tone, something in the direction of a cold black, which is produced by it. Another reducer which has a very similar action, and in our experience is quite satisfactory in use, is that worked out by Mr. Haddon, and consisting of about ten grains of potassium ferricyanide and twenty grains of ammonium sulphocyanide dissolved in four or five ounces of water. It cannot be denied that these reducers are inadequate when the object is to reduce, for example, one of a dozen prints in order that the whole lot may be identical; but they have their use in cases where a single print is being made and where a mistake in printing, unless it can be rectified, may lead to some considerable loss of time in taking a second impression.

The Belitski Reducer for Negatives and Bromides

IN disagreeing with "Practicus" who recommends Farmer's reducer, Harold Baker writes in *The British Journal* as follows:

"My experience with Farmer's reducer is exactly contrary. When I wished to reduce a hard negative I used it so strong that it acted very rapidly, so rapidly in fact that the dish had to be violently rocked to ensure even action over the whole of the plate, and I always kept one finger under a corner of the negative so that I could snatch it out of the reducer and hold it under a strong flow of water from the tap, which was kept running during the whole time, so that not a second should be lost in turning on the water. The whole time of the reduction would not exceed ten seconds on many occasions. But if I wished to reduce the shadows without affecting the highlights I used it so dilute that the operation would take ten minutes or longer. I have quite given up using this reducer, except when I wish to make a negative more brilliant to put sparkle into a lantern-slide which is muddy.

"For the last year or two I have used another reducer for softening contrast; it is known as Belitski's. It works very evenly, attacks the dense parts first, or it appears to do so, and reduces the shadows only when a great amount of reduction is attempted. It is the best reducer of bromide prints I have ever used. It will keep in good condition for months in the dark-room, is always ready for use, and may be used repeatedly till exhausted.

"It is made by dissolving potassium ferric oxalate 22 grains, and sodium sulphite 18 grains, in water 1 ounce. When dissolved, a blood-red solution is formed. To this are added a few crystals of oxalic acid. As soon as the red solution turns green, it is poured off the crystals, which may be thrown away. Finally, hypo, 120 grains in $\frac{1}{2}$ ounce of water, is added, and the reducer is ready for use. Negatives may be put into it as soon as they are fixed, unless they have been developed with pyro, and the fixing-bath discolored with pyro. In such cases, it is advisable to wash the negative before reducing, to avoid an ink-colored stain formed by pyro still remaining in the film and the iron salt in the reducer. As a matter of fact, ink is really made by mixing gallic and iron compounds. As the solution keeps indefinitely in the darkroom, it is convenient to make up fifty or more ounces at a time, and it is then always ready to reduce either negatives or prints. I have not tried it for print-out silver papers, but I should think that it would work equally well with them. It is convenient to make up this reducer with a smaller proportion of water when making a stock-solution, as it works rather slowly for negatives if used at the strength given above, but it should be diluted considerably for bromide prints. It will not reduce toned bromides.

"Ammonium persulphate has never been a favorite of mine, as it has always been so erratic in my hands, and has more than once ruined a negative, and the Belitski reducer has proved a good substitute. This latter is most useful when making a series of negatives on panchromatic plates, for instance, when it seems almost impossible to obtain even density, in spite of all precautions in using exposure-meters, standard developers, and timing-development; the density of the negatives will persist in coming of different densities. It is then that this reducer is so useful, because the denser ones can be brought down gradually to the proper density without upsetting the proper gradation. I think that professional photographers would find it a most useful addition to the darkroom solutions."



ANSWERS TO QUERIES



E. T. Z.—The general opinion is that glycin gives the finest grain negative; but scientifically it has been proved that there is no appreciable difference in grain size with the various developers, except with paraphenyldiamin, which is very little used. Glycin has the advantage that it is not affected, as regards rate of development, by air dissolved in water. It works cleanly, and provided the time of development is not prolonged unduly, it gives soft negatives very suitable for enlarging. An excellent formula is:

Glycin.....	$\frac{1}{2}$ oz.
Sodium sulphite.....	$\frac{1}{2}$ oz.
Potassium carbonate.....	$2\frac{1}{2}$ oz.
Water to.....	600 ozs.

Rub the glycin and sulphite into a cream with about 10 ounces of water, then add the carbonate and add the rest of the water. This takes about ten times the normal time of development to obtain the same degree of contrast.

With reference to the rodinal query, assuming that Kodol is paramidophenol, there is no reason why a good developer should not be made on the lines suggested; but as a paramidophenol base is precipitated from the sulphate or hydrochloride, and Kodol is probably the latter, by an alkaline sulphite, one might stir such a mixture forever and the only result would be a slow oxidation of the paramidophenol and the formation of a dark color. The proper way to make this developer is to dissolve the sulphite in warm water not above 100° F., and add the Kodol and stir for about one minute and then add the solution of caustic potash in small quantities, stirring well for about 15 seconds after each addition, until a perfectly clear solution is obtained. The resultant solution may be slightly colored, but this is of small moment, as when diluted for use it will be practically white.

S. B. H.—Complete instructions and formulae to produce a bromoil print—from the time that the bromide print is made to the pigmentation stage—calls for rather a long reply. The best plan would be to obtain the "Wellington Handbook" published by Messrs. Wellington and Ward, Elstree, Herts, England. We have in stock, "The Oil and Bromoil Processes" by F. J. Mortimer, F.R.P.S., and S. L. Coulthurst at 75c. per copy postpaid. These books contain a mass of useful information, full instructions for making bromoil prints, including formulae. In brief, the process consists of bleaching a thoroughly fixed, washed and dried bromide print in a bleacher, for which the following is a good formula: 10% sulphate of copper-solution, 6 drams; 10% potassium bichromate solution, 2 drams; 10% potassium-bromide solution, 4 drams; pure hydrochloric acid, 2 drops; water, 9 ounces. This should be used at a temperature of from 65 to 75 degrees Fahrenheit. After bleaching, the print is washed in water at a temperature of 70 to 80 degrees Fahrenheit and fixed in sodium hyposulphite. 1 ounce; sodium sulphite (crystal), $\frac{1}{2}$ ounce; water up to 10 ounces; also at a temperature of 75 degrees Fahrenheit. It is next washed in water of the same temperature and should then be ready for pigmenting; or the print can be dried after bleaching,

and re-soaked for an hour in warm water when required for pigmenting.

W. P. J.—The fitting of a Compound shutter to a lens—provided that the lens itself remains the same—should not upset the focusing-scale. However, without knowing exactly what has been done we cannot say whether it has done so or not. It may be that the only difference is that the lens is at a slightly different distance from the plate, in which case a movement of the scale bodily—or else a movement of the pointer by itself—would be all that is necessary. On the other hand, the shutter may have been fitted in such a way that it has altered the separation between the two component parts of the lens. This would have the effect of altering the focal length of the lens and would mean that an entirely new scale would have to be made. Were the camera ours we should remove all the film from it, place a piece of groundglass so that the ground surface of the glass occupied exactly the position of the surface of the film, open the lens to full aperture and focus it some evening on the flame of a candle placed at various measured distances away. By covering the focusing-scale with a piece of gummed paper for the time being and marking on it the distances at which different objects were sharp, you would be able to determine whether a new scale was necessary.

R. C.—To reproduce a negative it is not necessary to photograph a print. A negative can be reproduced by making a glass-positive from it—exposing an ordinary plate under the negative by contact in a printing-frame and then by developing and fixing it in the usual way. From this positive a fresh negative is made by a repetition of the process. It is very important in both cases to expose and to develop correctly. The exposures are usually very short—not more than a very few seconds to the light of a candle at a distance of four or five feet. The exposing and developing must be done in the darkroom.

B. L. C.—Portraits may be made in a small room and with a roll-film camera. However, no lens-system can exercise a favorable influence in the case of a room which is too small. If you can get only seven feet from your sitter, you will not be able to do anything very much in the way of portraiture. Whether you use a roll-film camera or not would make no difference in the quality of the results, except in this respect that for indoor-portraiture a camera which does not admit of the image being focused on the groundglass is radically unsuitable. We do not mean by this that portraits cannot be made with it; they may be made with any camera; but the photographer can hardly hope to do serious work under such limitations. The principal requirements for a lens for indoor-portraiture are a large aperture and a focal length which is not too long for the room chosen. Only head-and-shoulder portraits should be attempted in such a room.

W. R. M.—There are several books on professional photography that would interest you. "Professional Photography" by C. H. Hewitt, in two volumes, \$1.50 postpaid, is a good text-book that teaches the rudiments. Although written several years ago, Mr. Hewitt's work is of great value to the beginner in portraiture.



OUR CONTRIBUTING CRITICS



YOUR CRITICISM IS INVITED

Whoever sends the best criticism (not over 150 words) before the twentieth of the current month, will receive from us a three-month subscription to PHOTO-ERA MAGAZINE.

The winning criticism, in our opinion, is the first one printed below.

Boys with Dutch get-up, curly hair and socks seem an incongruity when placed in a meadow. The camera-man evidently has insisted on perfect stillness and attention; even the dog is on good behavior. The little boy is in an awkward position. Had he been on the ground playing with the dog and the older boy an interested onlooker, how much more human the general result would have been. The large stone behind the dog's head should have been removed or darkened in the print. The technical work is admirable. The sky-rendering, the diffusion of the trees, the choice of lighting and general tone are all fine. The strong horizontal lines are subdued by the verticals of the figures and the post at the right. There is too much angularity to the composition—a stilted picture.

RALPH A. BARFORD.

P.S. This is my first attempt as an "art-critic." I have always been extremely interested in this department and believe that it is a great help to aspiring pictorialists.

Thus picture, with its snappy contrasts, gives an effect similar to a wash-drawing and is very effective, though the art-editor is likely to explain that a softer paper or a longer exposure would give more detail in

the shadows and, consequently, less contrast. I would sympathize with Mr. Dunning, were such a criticism offered; it would be almost as if an advertisement were criticized for being conspicuous.

Cover the lower part of the picture ($1\frac{1}{4}$ inches) and the remainder will be found "easier to look at." The figures of the children would no longer divide interest with the dog. The reposeful camera-consciousness of the dog belies the appearance of naturalness and activity in the children. It is hazardous to suggest how the dog should have been placed; but artistically, at least, he must feel the weight of the children suspended above his back.

If, in addition to curtailing the foreground as suggested, Mr. Dunning were to transform (on the negative) the top of the dog's head with the rock behind it into a part of the field, and soften the white line at left of the smaller boy, two distracting features would be removed and a successfully harmonious picture be the result.

WINN W. DAVIDSON.

Owing to the height of the fence, it is difficult to group all of the elements in one picture. However, I believe, the picture could be improved by having the operator stand farther from the subject, and hold the camera about six feet from the ground (using a direct-view finder) and by eliminating the dog. Raising the camera, would cause the background to separate from the fence-rail. To stand farther back, would allow the photographer to leave more space at the left and top. Were the dog removed, we would eliminate



THE PICTURE CRITICIZED THIS MONTH

a disturbing element by placing all of the attention on the children, and not on the dog. We would then remove the disturbing foreground by trimming, and leave the right side intact.

OLIVER WILLARD.

A NICE, clean, clear-cut and yet not too sharp picture. The boys and dog too nearly occupy the center of the print. The upright post of the fence, unfortunately, is entirely too pronounced and, if it were cut out entirely, the print would be greatly improved. If the stone, immediately back of the dog's head, could not have been moved, then the dog's position should have been changed, as this gives it a most peculiar look until one has figured out that it is the stone which produces this peculiar effect.

The dog and little fellow are looking directly into the eye of the camera; and the larger boy, while looking away from the camera, still appears to be posing for his picture. If the three could have been posed to be interested in each other, or one single thing attracting their several attentions, it seems to the writer that a more nearly perfect picture could have been obtained, eliminating, of course, that very objectionable post.

ERNEST J. FOX.

It is certainly refreshing to see such perfect technique as is evidenced by Mr. Dunning's print. The exposure, lighting, values and all the other technical problems seem to have been worked out with much skill. The photograph contains three charming por-

traits; nevertheless, it is not a successful picture because it violates the very essence of composition—principle. Here the two boys and the dog each strive for preëminence and, as a result, the observer is bothered by the contending elements. Aside from that, the figures are placed in the most unstable of all forms of composition, *i.e.* the inverted triangle. Another thing, the bars have no visible support on the left, so that one subconsciously fears for the safety of the youngsters. Also, the black patch in the lower left corner is rather disagreeable. As it stands, the picture is a good record, but not a pictorial photograph.

JOSEPH COBURN SMITH.

THE subject of this picture is wonderfully expressive and natural; but is not well brought out. The child sitting on the top rail would be of more advantage if it were standing on the ground in front of the fence looking up at the other child. A longer exposure would give more detail in the shaded faces of the children and thus more expressiveness of the main theme—the adventurousness of childhood. The dog, a very indifferent guardian of his youthful charges, would add to the picture if sitting in front of the fence with his attention fixed on the climbers. The top rail of the fence should not be in direct line with and hiding the horizon. The camera should be lowered thus putting the horizon between the rails and accentuating the height of the fence. The heavy black border should be removed.

EGBERT H. WALKER.



OUR ILLUSTRATIONS

WILFRED A. FRENCH



THE criticism directed at the average popular-magazine cover, because of the inevitable picture of a pretty girl, with the appearance of limited intelligence does not apply to PHOTO-ERA. The instances when an example of female loveliness has adorned the front-cover of this publication are extremely rare, and even then character and significance have been strongly in evidence. In the present case, the picture (repeated on page 129) offers material for earnest contemplation and visual enjoyment. The Editor must plead ignorance regarding Beth Beri, the model for "Ariadne"; but if the latter be the young woman who, in Greek mythology, is associated with Theseus in his adventure in the Cretan labyrinth, then the scene pictured by the artist, Louis Fleckenstein, the well-known pictorialist, is easily explained. It must be the moment when, deserted by Theseus on the island of Naxos, Ariadne is overcome by despair and contemplates self-destruction. The scene has been well "staged" by Mr. Fleckenstein and also admirably interpreted. Both artists share the credit for this artistic accomplishment.

The frontispiece is one of a series of pictures that accompany the story of an actor-photographer (Hamilton Revelle, pages 132 to 137) and, in historic interest, may still be associated with the recent national holiday, February 22. The significance of Mr. Revelle's pictorial achievements—particularly the three full-page plates, published in this issue through the courtesy of the Century Company, New York City—will be appreciated after a perusal of the interesting narrative of his photographic experiences. Of the author's forceful personality, as expressed in these large plates, there is obvious proof. It is pleasing and instructive, also, to observe that he applies the principles of his (the histrionic) art to the art of pictorial photography, which would prove that a true and finished artist—whether a painter, sculptor, musician, poet or actor—can express himself successfully through the medium of photography, especially when he is so accomplished an executant as Mr. Revelle. Here, then, we have an object-lesson of the importance of a camerist's ability not only to create a picture (the initial stage of finding and developing the theme or subject), but still further to express his individuality through his printing-medium; for Mr. Revelle prefers to prepare his own, as do Macnoughtan, Anderson and other distinguished photo-pictorialists. Data contained in the topic.

Herbert B. Turner presents an alluring topic, the photography of architectural treasures in Southern France (pages 115 to 125)—one which is not difficult of realization, for the Editor has heard that several Americans equipped with cameras will journey to the Midi de la France during the revival of foreign travel, the present summer, and visit the very places so well pictured and described by our friend and contributor, Herbert Bryant Turner. Data: France; May 15 to July 1; Richard Verascopie 45 x 107 mm; matched 2½-inch Carl Zeiss Tessar lenses; stop, F/8; 1/75 second; Eastman Rapid Orthochromatic (English); pyro; Artura Carbon Black and Wellington Chamois Soft; enlarged by Carl Zeiss Protar lens.

Much of the charm of Katherine Bingham's lake-view, page 131, lies in its elliptical arrangement. The

foreground is extremely attractive, as are also the receding planes beyond. Though relatively small, the picture makes an irresistible appeal by its pictorial beauty and thematic originality.

What on earth are those Americans doing down there in Washington? This, perhaps, is what is worrying the birds of Freedom, whose fathers and forefathers have ever been on guard, ready to defend the Republic founded by George Washington, Benjamin Franklin, Patrick Henry and other distinguished patriots of the War of Independence.

These young masters of the air are evidently in a serious frame of mind; and well they may be! However, we shall leave them to their meditations. No doubt, they will solve the problem of Americanism—a subject that appears to be misunderstood or not fully grasped by many natives of this broad land of ours. Would that these noble birds—symbols of courage, power and loyalty—would course the air and convey the message of lofty Americanism to every part of this troubled country or, if necessary, make it clear that no treachery against this government, no violation of the Constitution and American rights will be tolerated.

The picture has much pictorial merit other than technical excellence. The grouping of the birds is particularly happy, and the absence of distracting details is to be highly commended. Data: Lafayette National Park, Mount Desert, Maine; July, 1919; 10 A.M.; thin clouds in sky; 8 x 10 Century Camera; 12-inch Voightländer Dynar; at F/22; 1/5 second; Standard Orthonon plate; M.Q.; print on P. M. C. No. 6. The following account of Mr. Dockham's exploit is reprinted from a Bar Harbor newspaper:

"A. S. Dockham, the official photographer of the Lafayette National Park, has succeeded in making a photograph that will prove of great interest to nature-lovers, viz. of two young bald eagles in their nest near Eagle Lake.

"The nest that was discovered during the winter by John Rich, one of the park-rangers, is in the top of a high maple about fifty feet from the ground. Mr. Rich found the nest when the parent-bird was building it, and it has been under observation during the spring. When the young eagles were hatched, Mr. Dockham decided to try to obtain a photograph of them in the nest. At first, he tried to put his camera in the top of a nearby tree; but this was found to be screened to a great extent by the foliage. He then brought a long extension-ladder to the spot with much difficulty and erected a platform on which the ladder was raised. The ladder-top was about sixty feet above the ground and commanded a fine view of the nest. He clamped his camera on the ladder and led a string from the shutter to the crotch of the tree about twenty feet lower. Here he stayed and watched the nest. He made about a dozen photographs, three of which were very successful. In order to obtain the photographs, he was forced to remain in the tree for about five hours. The eaglets moved around very little, and a long wait was necessary in order to get the pose desired."

"Sundown," in the artist's best style, appeals to us by reason of its well-expressed idyllic beauty. The arrangement and spacing are alike admirable. Page 139.

Although made nearly eighteen years ago, the fire-scene, page 140, is still a picture of absorbing interest. In the opinion of the artist, Horace A. Latimer, a conspicuous picture of a spectacle like this—the curving lines of hose—should be included in the pictorial composition, even if the principal object was made to occupy the middle of the picture-area. Thus the foreground seems to have sufficient solidity to bear the heavy burden of fire-engines, buildings and onlookers. To have raised the eye of the camera, thereby abbreviating the foreground, might have resulted in a commonplace, conventional theme. The scene lacks nothing in truth and in true pictorial quality.

Advanced Workers' Competition

GUY E. OSBORNE, the author of "Meeting a Necessity," page 143, is another worker, who appears to have been influenced by Jean François Millet, of the Barbizon school. He could scarcely have studied the work of a greater master—if such has been the case. The subject, method of expression and treatment suggest the intimacy of feeling so characteristic of the great French painter. But where balance often is obtained with the aid of color, in photography tone-values take its place. Here, however, the entrance to the cellar attracts undue attention; indeed the entire feature, with the door swung back against the wall, struggles for supremacy with the man at work. Divided pictorial interest, therefore, seems to be the means that has prevented a complete artistic triumph. Data: December 25, 1919; bright sunlight (on snow just outside the entrance); $8\frac{1}{2}$ -inch T. R. Anastigmat; at stop F/16; 5 seconds; three thicknesses of chiffon over lens; shadows illuminated with 20 grains of flashpowder placed near camera; Hammer Extra Fast; pyro-soda; contact-print on Artura Iris Buff.

Thomas Elsum's effort, page 144, shows a sincere appreciation of the workingman's fitness as an artist's model. So did the eminent French painters, Millet, L'Hermitte, Breton and Dagnan-Bouveret. Participants in PHOTO-ERA competitions are showing excellent judgment in this respect. The pose, lighting and general treatment in Mr. Elsum's picture are evidence of first-rate artistic ability. That the figure occupies the exact center of the picture-space is, perhaps, to be regretted. It is not a serious fault, however, for the whole left side of the picture is quite interesting. More space at the right, and less at the left, also a little added to the top, would certainly improve the general appearance of the print. As to the title—one more in keeping with the character of the subject would be preferable. Data: Indoors; reflected light; 3 seconds; lens at F 9; Orthonon Plate; enlarged on P. M. C. Bromide.

Among the numerous meritorious Honorable Mentions is Joseph Bonanno's of what appears to be the waiting-room of a railway-station, with the figure of a man reading. The technical quality is admirable, although the back of the camera evidently was not plumb during the exposure. Data: Cambridge, Mass.; February; 1 P.M.; bright light; Ernemann $1\frac{3}{8} \times 2\frac{1}{2}$ camera; $3\frac{1}{2}$ -inch Doppel Anastigmat; stop, F/6; 1 second; Eastman film; M. Q.; enlargement on P. M. C. No. 2.

Nothing finer, with regard to composition and pictorial effect, than "Fishing-weather," page 146, has come from the well-filled portfolio of Geo. W. French. This picture appeared originally in July, 1918, PHOTO-ERA, but is used as an example of artistic interpretation in connection with the next subject for competition.

Data: August, 2.30 P.M.; rainy; 5×7 Tele-Photo POCO; rear lens of 9-inch B. & L. R. R.; stop, U.S. 16; 2 seconds; Standard Plate; pyro; enlarged on P. M. C. No. 8; cloud printed in.

Beginners' Competition

"NOVEMBER," page 149, certainly is a beautifully composed winter-scene. The connoisseur is pleased to observe how admirably the principal objects are placed, how they separate the picture-planes, and to admire the interesting and yet not obtrusive character of the young snow, not to neglect the short, curving road in the distance. Mr. Rodgers, the author of this highly satisfactory achievement, evinces an artistic understanding and technical ability of a high order, and one is justified to expect from him as good, if not better things in the future. Data: Winnipeg City Park; early in November; between 3 and 4 P.M.; bright sunlight; speed Graphic, $3\frac{1}{4} \times 4\frac{1}{4}$; 5-inch Tessar Ic, F/4.5; stop, F/16; 8-time ray-filter; two seconds; Speed-Pack; Premo Tank-powders; enlargement on Eastman Bromide Rough.

"Rolling Waves," page 150, indicates the dark waters of the Northern Pacific coast in admirable perspective, as seen from a rocky promontory. Whatever the cause, the camera was not held properly during exposure; and to trim the print as it should be, would mean to sacrifice a large part of the tree. Underexposure, owing to the use of a ray-filter, is responsible for the black appearance of the near objects. Data: July, 1918; 1 P.M.; dull light; Premo Junior ($2\frac{1}{4} \times 3\frac{1}{4}$); $3\frac{1}{4}$ -inch achromatic lens; stop, F/8; 1/25 second with ray-filter; Premo Film-Pack; pyro in tank; enlarged on P. M. C. Bromide No. 2.

Our Contributing Critics

THE picture offered this month to our contributing critics for consideration is "Attention," by C. F. Bellemere.

Data: June; bright light; 4×5 Premo camera; rapid rectilinear lens; stop, F/16; 1/25 second; Cramer Iso Medium; pyro in tray; P. M. C. Bromide No. 4.

Flashlight Exposures

It should not be forgotten when making flashlight-pictures, states the good, old *British Journal*, that the distance between the flash and the subject regulates the amount of power that is necessary to be consumed to give sufficient exposure—that is to say, when using a powder of which thirty grains will give a satisfactory negative of a head at five feet from the lamp, over an ounce would be required if the flash were removed to six times the distance, or thirty feet away. This can be seen by examining most flashlight-pictures of dinners and meetings, in which the near figures will be seen to be over-exposed, while the more distant ones are almost in darkness. This indicates the desirability of firing the flash as near to the subject as is consistent with even illumination of both sides and keeping the flash out of the field of the lens. Some of the most successful results we have seen have been obtained by firing the flash behind a high screen halfway between the lens and the front of the group. Many photographers, when working single-handed, are in the habit of firing the flash on a level with the camera, of course, at a good elevation, and in this case the shorter focal length of the lens the more effective will be any given quantity of powder.



ON THE GROUNDGLASS

WILFRED A. FRENCH



The Story of a Lost Secret

It happened fifteen years ago, during the days of freak-photography—now, Heaven be praised! a thing of the past. The heroine of this sad, tearful story was a photographer of eminent ability and international reputation. Portraiture and genre were her specialties. At about that time she became identified with a coterie whose members went to extremes in the expression of their ideas, and were regarded as fanatics. One of these devotees used to hold exhibitions of strange, mystic arrangements in his home. They hung on the walls, a lighted candle at the side of each freak. The visitor—compelled to subscribe to the regulations of the cult—slipped his feet into slippers and, holding a lighted taper in one hand and a lily in the other, reverently approached and examined one picture after another. Those were strange, awe-inspiring days. They are gone, but not forgotten.

Mrs. X. was conservative in her expressions of adoration and, in her photographic practice contented herself with imparting a reasonable degree of unconventionalism. Some of her impressions were really noble and poetic in conception. Her technical method, however, was emphatically unique—a kind of uniformly nebulous haze characterizing her prints. The effect was not altogether displeasing, yet it was the source of much speculation among members of the coterie just what means she employed to produce it, and the question was politely, but firmly evaded by Mrs. X. As an examination of the prints revealed not the slightest clue to the mystery, the janitor who cleaned the studio each evening was pressed into service and instructed how to search the premises for evidence. He failed ingloriously. The conspirators next approached the printer; but when that worthy declared that only straight prints were produced in Mrs. X.'s studio, and that "it was all in the negative," the investigation was abandoned. One day later, it was discovered that Mrs. X. had been overtaxing her strength and needed a studio-assistant. Her competitors were overjoyed, for they saw an opportunity to gain their point with the aid of a spy in the person of a capable and plausible young woman whom they "fixed" and sent to Mrs. X. as a candidate for the position of assistant studio-artist. The plot failed, for Mrs. X. decided to make her own, personal selection, which proved to be her niece—energetic, conscientious, incorruptible. One noon, Mrs. X. concluded that she would go home for the rest of the day, leaving the studio in charge of her niece, Miss K. It rained that day and, as no customers came, Miss K. obeyed instructions and dusted every article in the studio, including the large portrait-camera, inside and out. Peeking through the camera-lens, she noticed that it was dim. She promptly detached it, and gave it, also, a thorough cleaning, removing with an immaculate chamois-skin the layer of dust that covered the outer and inner surfaces of the lens. Replacing the lens, she gave a sigh of satisfaction, knowing that her conscientious labors would greatly please her employer.

Mrs. X. was on hand, the following morning, to make an important sitting at ten o'clock. After having posed her sitter, she raised the image focusing-cloth and noticed an unusually brilliant image on the groundglass. She rushed to the front of the camera and feverishly

unscrewed the lens. Looking through it, she uttered a loud cry and dropped to the floor in a faint. The secret that she had guarded successfully for several years had been discovered—'twas but a dusty lens!

The Limit of Conceit

No artist, perhaps, has ever exceeded Whistler in his manifestation of personal conceit. The story that is told about his opinion of one of his own pictures, when it was exhibited, with works by other artists, in the Grosvenor Gallery, London, many years ago, is matched in impudence by one that is remembered in connection with an old-time pictorialist, whose exorcism of self-esteem embarrassed the size of his hat. It frequently fell off during moments of heated discussions on advanced photography. The story goes that he had a picture in an exhibition of what his opponents facetiously termed, "Freak-Photography," in a New York art-store, about fifteen years ago. Meeting a friend who had just entered the place, and who was bewildered by the large array of photographs, the apostle of high photographic art took him up to his picture that represented an Eve-like figure clasping a large glass-globe. After the friend had expressed his appreciation of the masterpiece, he asked the photographer if there were any other pictures he would advise him to look at. "Other pictures?" replied his majesty in a tone of horror, "Other pictures! There are no other pictures. You are through!"

"What's in a Name?"

READERS of PHOTO-ERA may remember the developing-agent *Elon*, that was made by the Eastman Kodak Company and enjoyed much popularity, several years ago. All the same, I did not know, until quite recently, that this supposed trade-name was so highly esteemed, that it served as a baptismal name. Thus I read in *The Sun* of one *Elon H. Hooker*.

Now that George Eastman has had additional fame thrust upon him, through his munificent gift of \$11,000,000 to the Massachusetts Institute of Technology, being hailed as the Kodak King, I should not be surprised to hear, before long, that some prosperous Kodak dealer—if not our friend, Frank King—had his boy-baby christened "Kodak." Thus, a generation hence, for instance, "Ladies and gentlemen, I now present to you the speaker of the evening, Mr. Kodak King!"



The Value of Photo-Era

In answer to our request for certain back numbers we receive replies stating that we can be accommodated at fifty cents and upwards per copy.

Here is a specimen reply:

PHOTO-ERA: In answer to your ad in the December 1919 PHOTO-ERA, asking for back number of September 1918, I let you know that I have this copy and that I will dispose of it for \$1.25.



EVENTS OF THE MONTH

Announcements and Reports of Club and Association Meetings, Exhibitions
and Conventions are solicited for publication



Help the Salvation Army!

It is not necessary for us to remind our readers of the magnificent and self-sacrificing work that was done by the Salvation Army during the war. The same efficient organization is engaged in home service work which includes the care "of unfortunate mothers and nameless little children, hundreds of widows and orphans, thousands of convicts in prison-cells, tens of thousands of the homeless and friendless, countless numbers of America's sick, crippled, unfortunate and misfit men, women, and children. The enemies now



are the age-old foes of mankind—wickedness, degradation, poverty, sickness and misfortune. The soldier, sailor or marine may be back at desk, plow or machine; but the Salvation lad or lassie is still in the thick of the fight. From the morning to the evening of life there is no misfortune, no dark hour, but the Salvation Army stands ready with the helping hand, the simple, understanding service." Every true American will step forward and see to it that the Salvation Army Home Service Fund of 1920 is many times oversubscribed. Contributions may be sent to the National Headquarters, 122 West 14th Street, New York City or to local corps.

George Eastman for President

THE inevitable has occurred—George Eastman has been suggested by a Springfield (Mass.) newspaper as candidate for president of the United States. It is a fitting honor following the public announcement that he is the man who, for a number of years, known only as "Mr. Smith," gave a munificent sum of money to the Massachusetts Institute of Technology. He was not only the founder of the Eastman Kodak Company, but he devoted all his ability and energy to the systematic and successful upbuilding of that remarkable institution—a task that could be accomplished only by a man of genius. As a captain of industry, a man of high character and exemplar of lofty Americanism, George Eastman has no superior, and it is but natural that, as the country is eagerly seeking men of that stamp to guide America out of the present maelstrom of confusion and mismanagement, he should be mentioned in so flattering a manner. But a man of his natural modesty and dislike of public display could scarcely be expected to consider the honor with which his name has been so recently associated.

Spirit-Pictures by Kinematography

APROPOS of spirit-pictures, which, as an amusement, are again engaging the attention of amateur photographers on both sides of the ocean, we reprint an article from July PHOTO-ERA, 1913, that appeared originally in an English cotemporary.

"Considerable interest is being manifested in the latest kinematograph illusion, the 'Kinoplastikon,' which is now installed at the Scala Kinemacolor Theatre in Charlotte Street, London. The principle by which these spirit-pictures are produced reminds one of Professor Pepper's ghosts, that created so much interest many years ago.

"Here is a brief explanation of this new system of projection. In a fireproof chamber beneath the stage is the kinematograph projector, the rays of light from which strike a mirror placed some distance from the lens. The rays are then diverted by the mirror on to a semi-transparent medium which lies flat in an opening in the stage-flooring. This medium arrests the rays, but allows the projected picture to pass through until it falls on a large sheet of plate-glass placed immediately over the opening at an angle of about forty-five degrees. The light-rays are not detected by the audience, and the moving figures appear to stand out in relief on the stage; with the absence of a screen—the glass not being visible to the spectator—the illusion is complete. We understand that the making of the pictures for the Kinoplastikon involves but little expense and trouble, as all the actors are obliged to dress in white. The illusion has proved very successful in Vienna, where it was first shown, and it should come as a welcome addition to the excellent program already presented by Mr. Charles Urban at the Scala."

Photographers' Association of New England

WE have received reliable information that the annual convention, 1920, of the Photographers' Association of New England is to be held September 27 to 30, inclusive, at Springfield, Mass. The convention-program will be announced in due time.

Herbert Bryant Turner *En Tour*

OUR esteemed contributor, Herbert Bryant Turner, whose large and varied collections of photographs are due to their author's propensity for globe-trotting, had scarcely concluded a highly successful photographic visit to the landing-places of the Pilgrims—Provincetown and Plymouth, Massachusetts—when he started off for Barbados, W. I. He took with him not only his family, but several photographic equipments with adequate material, so that during a month's visit to this delightfully picturesque island, he is very likely to make a large number of typically beautiful pictures. Whereas Boston is chilly and blustering, during the month of March, Barbados is very, very hot, but filled with rare pictorial material. The trip to Barbados and back is said to be delightful.



SPIRIT-PHOTOGRAPH

Photographs Made Without Charge

AN interesting feature of the spirit-photographs made to order by Wm. Hope of Crewe, England, is the fact that he positively refuses to accept any payment for them. Indeed, he is said to request that the customer sign a paper to that effect. There may be reasons for his generosity. First, the photographs—as may be seen by the accompanying illustration—are technical atrocities and, probably, he feels ashamed to ask for remuneration. Second, to treat the matter commercially, might offend the spirit of the departed whose portrait has been so obligingly impressed upon the photographic plate. Besides, the photographer, who poses as an unobtrusive, unsophisticated and ingenuous carpenter with no knowledge of photography, and acts his parts admirably, is undoubtedly a member of a syndicate which, through a nimble representative now appearing before gullible (interested) audiences in America, will divide the easily-won gold dollars among its members, including the innocent photographer. Fifty-fifty is the basis on which the enterprise probably is managed. As to the alleged spirit-photographs—just look at them! What a calumny on a respectable spirit! Who would be willing to have the spirit of a loved one return in such a guise? Some of the “spirits” invoked by the English photographer look like cut-throats or imbeciles, rather than gentle, honest beings of the vale beyond.

A Lecture on Girls

OUR good friend and *confrère*, Edward F. Bigelow, A.M., Ph.D., editor of *The Guide to Nature*, announces that he has prepared “a new lecture for adults from a half century’s personal acquaintance, more careful observations and a wider range of unique experiences with girls than by any other man in America. The lecture has a wide range of inspiration, education, philosophy and humor. It is by an experienced lecturer and in a class by itself. It is well adapted to Women’s Clubs, Teachers’ and Parents’ Associations and similar organizations.” For terms and dates, address Edward F. Bigelow, Arcadia, Sound Beach, Conn.

The Cadbys in Switzerland

OUR London correspondents, the Cadbys, have been spending the winter at Mürren, Switzerland, after an absence of about six years, or since the outbreak of the World War. This famous summer- and winter-resort—dear to the heart of every Englishman who has been there—is situated high above the Lauterbrunnen Valley (5,500 feet) and affords a magnificent view of the Jungfrau range. The winter-sports are particularly alluring to Englishmen; but the Editor recalls several visits to this inspiring region—in 1889, 1902 and 1904—enjoying the wonderful scenery and the beautiful Alpine flora, as his camera-pictures help him very pleasantly to remember.

A Lens-Innovation

WE wish to call our readers’ attention to an illustrated feature-article by a distinguished American amateur photographer, which is to appear in April PHOTO-ERA. The article will describe in detail an innovation in the manufacture and use of lenses.

Metropolitan Section of P. P. S. of New York

THE Metropolitan Section held its first informal dinner of the New Year at the Hotel Astor on the evening of January 14. The dinner was tendered to Mr. John H. Garo, of Boston, Mass. Our other guest was Dr. E. C. K. Mees, of the Research Laboratory of the Eastman Kodak Company.

After the dinner, Mr. Dudley Hoyt, the chairman, addressed the members and spoke very feelingly of the support that was given him under the new order of things and was exceedingly gratified at the large attendance. Concluding his remarks, he introduced “the boy of yesterday, the workman of to-day,” Mr. Garo, who spoke interestingly in a reminiscent mood.

Following Mr. Garo, Dr. Mees gave a very instructive and interesting lecture on emulsion-making and the developing-agencies, illustrated with stereopticon-views.

At the conclusion of his lecture, he answered many questions, and a rousing vote of thanks was extended to him.

The section went on record as favoring the Daylight Saving-Law, and the secretary was instructed to notify Mr. Marcus Marks, President of the National Daylight Association to that effect.

L. L. DE ANQUINOS, *Secretary*.



LONDON LETTER

CARINE AND WILL CADBY



FIVE hundred exposures a second! It is exhausting for an ordinary photographer to contemplate such hustling through of film. But we are asked to believe that this is the record in film-photography of two French scientists, MM. Abrahams and Bloch. They used electric sparks emitted by a special apparatus, and were able to take a detailed and accurate cinematograph-record of the track of a revolver-bullet. This invention will enable precise photographs to be made of every form of movement in the human organism. Really, one would hardly think such velocity necessary. Five hundred exposures a second! We repeat it almost with a sigh, and can only use the words of another story, and say "Let's hope it isn't true."

It has just been stated in the law-courts by Mr. Justice Rowlatt—no doubt, to the satisfaction of all but camera-men—that a photographer is neither an artist nor a professional man. The case arose on an appeal by Mr. H. C. Saunders, photographer of Victoria Street, London, against the ruling of the Inland Revenue Commissioners, which held him liable for excess-profit duty. Mr. Saunders, it seems, regarded photography as a hobby, and in 1912 he took a studio in Victoria Street. During a period of three years, he made no profit. However, his sitters increased, and he now charges from 8 to 10 guineas for a single print, for the reason that he studies the sitter and composes the picture in his mind, doing just what a portrait-painter would do. The Solicitor-General said that historically the Church, Medicine and the Law were regarded as the professions. The common ground of each was preparatory study and mental training. Profession was intended to be a word of limitation as opposed to commercial business, and it must depend on mental qualifications.

Mr. Saunders lost his case, and we cannot help thinking that the definition of "profession" needs overhauling, for there are many professions—we mean occupations—of the present day that require quite as much preparatory study and mental training as any one of the professions named. But apart from this, who is this photographic Mr. Saunders who can command ten guineas for a single print, and has to pay excess-profit duty on his business? Photographers are doing extraordinary well; but, from all we hear, the price named is near the top-figure *per dozen* in London, at the present moment. Possibly, we may see Mr. Saunders' work at the next Salon.

At the Carpentier-Beckett fight, about which most people seem to have been more excited and interested than in the war, the kinema operators were precariously suspended over balconies, loops of rope being provided for them to rest their feet in. Presumably, they were perched in this curious position to prevent the obstruction of the view of the four or five thousand spectators, many of whom paid ten guineas for a seat. There must have been plenty of kinema-film left over, for the fight was more than all over in a couple of minutes.

The well known English paper, *Truth*, in reviewing a book, called "England in France," which is profusely illustrated with full-page drawings and thumb-nail sketches, gives us photographers a nasty hit by observing that "the pencil of the artist reveals so much more than the brainless camera." This may be so, and

we should be the last to deny to drawing its originality and beauty. But to dub the camera brainless is quite another matter, and we smile good-naturedly at the idea when we reflect how very many draughtsmen are glad to use it for their own purposes. We still have the recollection, fresh in our memory, of a press-artist, a man of the pencil and brush, buying a print of a negative we made of a celebrated man of letters. The result appeared as the frontispiece of a weekly paper, with the artist's name large in the corner, and this "brainy" drawing was simply a careful enlargement of our photograph. So slavish a copy had he made, that even blemishes which need not have been included were all there! The brainless camera, and by implication, the brainless photographer that caught the characteristic expression and pose of the great man, were of course not acknowledged. It may be smart to incorporate another man's original work in a drawing; but we should hardly call it brainy.

Spirit-photography has been much in evidence this Christmas. The Rev. Walter Wynn, in the *British Man and Woman*, writes an article with the arresting title, "Is William Ewart Gladstone living?" Mr. Wynn, who is a confirmed spiritualist, declares that at a sitting which Mr. William Hope, the psychic photographer and member of the Crewe Spiritualistic Circle gave him, the spirit "extras" of Mr. and Mrs. Gladstone appeared on the plate. Then one of the enterprising daily papers organized a test, and a spirit-photograph was produced by Mr. Hope. The gathering was arranged by Miss Estelle Stead, the Hon. Secretary of the W. T. Stead Borderland Bureau. Sir A. Conan Doyle has joined the fray, and suggests that these photographs are not photographs at all, but psychographs, which does not seem to the outsider to conduce towards illumination. Even so astute a professional photographer, as Mr. S. Elwin Neame, has rushed into print to explain how these spirit-photographs are made. Incidentally, he enlightens the subject somewhat by suggesting that some well-known departed portrait-photographer be called up, so that he could at least pose the spirits more carefully on the photographic plates, and give us fairly artistic results! And so the ball is kept rolling, and we have yet to discover what our fresh development to report.

Talking of Mr. S. Elwin Neame reminds us that he has lately gone in for a new kind of portraiture. The idea is to combine real photographic backgrounds with the portrait. For instance, a girl in bathing-costume is depicted sitting on the sands with a wild (photographic) wave breaking around her. Another lady with her arms filled with flowers has a bit of river-scenery taken close to Canterbury as her background; and yet another has the busy Bond Street-Piccadilly corner behind her. And these combinations are made in the studio in London. It is very clever and ingenious and, frankly, we do not know how it is done; but it is sure to be popular with certain classes whose one aim is something new. If the late H. P. Robinson were still with us, he would probably exclaim, "Very nice; but is it Art?" And as the meaning of that much-misused word has suffered considerably even since his time, we should almost feel inclined to answer his question in the affirmative.



BOOK-REVIEWS

Books reviewed in this magazine, or any others our readers may desire, will be furnished by us at the lowest market-prices. Send for our list of approved books.

THE AMERICAN ANNUAL OF PHOTOGRAPHY. 1920. Volume XXXIV. Edited by Percy Y. Howe. With copious illustrations in black and in tint. Price, paper, \$1.50; cloth, \$2.00. Postage, according to zone. New York: George Murphy, Inc., 57 East 9th Street, sole sales-agent.

With usual regularity, America's popular photographic annual has made its welcome appearance, and this despite conditions which have not yet been entirely overcome. Nevertheless, the 1920 edition reflects great credit on the determination of its publishers, and resourcefulness and good taste of its editor. The authors in this year's volume include such well-known authorities as Dr. T. W. Kilmer, Geo. W. French, William S. Davis, Henry F. Raess, Paul L. Anderson and A. H. Beardsley. Among the pictorial illustrators whose work is of outstanding merit, are Rudolf Eickemeyer, M.R.P.S., Paul L. Anderson, Dr. O. E. Fischer, G. W. Harting, Louis Fleckenstein, Wm. T. Starr, Lawrence Baker, Laura A. Arner, Louis Astrella, A. B. Hargett, Dr. R. W. Shufeldt, George S. Seymour, Louis A. Goetz, Louis J. Steele, E. R. Dickson, James E. Paton, Theodore Eitel, John M. Whitehead and Jared Gardner.

The appendix contains lists and tables of value to the worker, also the latest list of American camera clubs and societies. As the book will be in great demand, and the supply is limited, we advise those interested to order their copies at once—either from their dealer, or from the publisher of PHOTO-ERA.

PICTORIAL PHOTOGRAPHY IN AMERICA 1920. Format, 8 x 11 inches. Attractively bound in boards, cloth-back. 100 full-page halftone-plates. Text, pictorial photography in the United States. Price, \$3.50 postpaid in the U. S. New York: Pictorial Photographers of America; Tennant & Ward, 103 Park Avenue, New York, publishers' agents.

It is with rare pleasure that the Editor receives a copy of this attractive volume which is a credit to its publishers and the American artist-photographers whose work it illustrates. The one hundred full-page plates in halftone exemplify the artistic ability of camera-workers in the United States, which, it is only fair to say, compares favorably with that of any class of photographers in Europe or elsewhere. Not only that; but the tasteful appearance of the book—the quality of the paper, the typography and the illustrations are the best that can be produced at the present time. As the book occupies a place in this country similar to that of *Photograms of the Year* in England, the resultant comparison of general merit appears to be in favor of the American rival. The volume in its completed form is due to the energy and taste of the Editorial Board of the body of workers known as The Pictorial Workers of America, and consists of Clarence H. White, W. H. Porterfield, John Paul Edwards and Dwight A. Davis. All praise to them!

Although each picture was selected because of its merit by a committee, of which each member is a photo-pictorialist of eminent rank, there is occasionally one, among so many, that will not make a successful appeal to the critical beholder; for it stands to reason that a collection such as this, which is made up of a great variety of subjects and represents many modes of expression, cannot satisfy all picture-lovers indiscriminately, no more than the paintings of the Louvre, the National Gallery, the Pitti or the Prado can provide uniform pleasure for each visitor. All the same, no edition of a similar pictorial annual—within our recollection—has presented in a single volume so attractive and so satisfying a collection of photographs as does the volume under consideration. To enumerate the subjects of special pictorial interest would be to give the entire list; but, as this is a personal and unbiased opinion, we can but give the array of masterpieces that have captured our hearts. The Buddha, Fred R. Archer; Early Morning, David W. Bonnar; A Bit of Home-Life, Will D. Brodhan; Douarnenez, Finistère, Dr. A. D. Chaffee; Rheims, Arthur D. Chapman; St. John's Cathedral, James Copella; Spring O' the Year, Helen W. Drew; The Doorway, Dwight A. Davis; High Bridge, Edward R. Dickson; Mrs. Vernon Castle, De Meyer; Boats, E. G. Dunning; Coming to School, Vernon E. Duroc; Design for a Tapestry, John Paul Edwards; Sidewalk-Treasures, O. E. Fischer, M.D.; Fifty Years, Fred F. Frititta; Water-Scene, John W. Gillies; The Marble-Cutters, Laura Gilpin; Walpi, Forman Hanna; The Shore-Line, G. H. S. Harding; April-Snow, Edward Heim; Day-Dreams, G. W. Harting; Portrait of a Child, Doris W. Jaeger; The Vale of the Shadow, Arthur F. Kales; Portrait, Gertrude Kasebier; Old Hill Town, William Kriebel; Solitude, W. R. Latimer; Ellen, Sophie L. Lauffer; Mount Adams, Francis O. Libby; On Lake Patzcuaro, Oscar Maurer; Snow-Pattern, H. Remick Neeson; The Morning-Boat, E. M. Pratt; The Husbandman; Pennsylvania Station, New York, Dr. D. J. Ruzicka; A Glimpse of Pleasant Valley, J. G. Sarvent; Elysian Park Vista, David J. Sheahan; Doorway of St. Patrick's Cathedral, William G. Shields; Towards Tamalpais, W. H. Stephens; Mae Murray, Ford Sterling; Margaret, John H. Stocksdale; The Canal, M. Sugimoto; With Face set toward the Western Front, Lieut. Edward L. Tinker, U.S.N.; Ruth St. Denis, the late Lieut. Luke R. Vickers; Girl with Fan, Mabel Watson; Eleanor, Delight Weston.

The text—in this case, of grateful brevity—has conspicuous historical and literary merit and consists of the following-named chapters: Foreword, Clarence H. White, president of the Pictorial Photographers of America; The Association's Work and Ann. Edward R. Dickson; Pictorial Photography in New Jersey, Louis F. Bucher; Pictorial Photography in Maine, Francis O. Libby; Pictorial Photography in Massachusetts, Dwight A. Davis; Pictorial Photography in Maryland, H. R. Neeson; Middle-West Activities and the Pittsburgh Salon, W. H. Porterfield, and Pictorial Photography in the Far West, John Paul Edwards.

The photographs reproduced in this annual were selected from a group of 1,100. Of the 100 artists represented, 36 are new workers; 16 were unknown to the judges; 32 are workers of recent years, and 16 are old workers. 56 are members of the Association, and 44 are non-members. A partial list of photographic organizations in America which are encouraging pictorial photography, and a complete index to articles, authors and photographs conclude a book that, cheap at the price, should adorn the library of every pictorial worker. Copies can be had of PHOTO-ERA.



RECENT PHOTO-PATENTS

Reported by NORMAN T. WHITAKER



THE following patents are reported exclusively for PHOTO-ERA MAGAZINE from the patent-law offices of Norman T. Whitaker, Whitaker Building, Washington, D.C., from whom copies of any one of the patents may be obtained by sending fifteen cents in stamps. The patents mentioned below were issued from the United States Patent Office during the month of January, the last issues of which have been disclosed to the public.

Patent, number 1,326,119, A Double Exposure Preventer for Cameras, has been issued to William Howard Touchette, of Burlington, Vt., assignor of one-half to Foster R. Clement, of Burlington, Vt.

Another invention assigned to the Eastman Kodak Company of Rochester, New York, is a Consecutive-Printing Apparatus invented by John G. Jones of Rochester, New York. Patent, number 1,326,062.

Isidor Kitsee of Philadelphia, Pa., has a Method and Means for Producing Multicolored Photography. Patent, number 1,325,992.

Patent, number 1,325,917, a Photographic Shutter, has been issued to Sherman M. Fairchild, Onconta, N. J. This invention seems to be a very broad one. There have been allowed by the Patent Office forty-seven claims.

William F. Folmer of Rochester, N. Y., has assigned his invention to the Eastman Kodak Company of N. Y. It is an Apparatus for Making Identifying Photographs. Patent, number 1,324,887.

An attachment for cameras, patent, number 1,326,038, has been issued to Michael L. Dumarest and Charles D. Fischer, of Folsom, New Mexico.

1,328,292 is a patent on a Photographic Apparatus invented by Edward C. S. Parker, U. S. Navy.

Another invention pertaining to Photographic Apparatus invented by the same man, patent, number 1,328,293.

1,328,294 is a Photographic Apparatus invented by Edward C. S. Parker, U. S. Navy.

Michael F. Kennedy, Jr., of Atlanta, Ga., has received patent, number 1,328,741, on a camera.

Clarence L. Thompson of Port Washington, N. Y., has received patent, number 1,326,379, on a Photographic Camera.

Many foreigners take out patents in the United States; for example: Gerard J. Terweil, The Hague, Netherlands, has secured patent, number 1,326,470, on a camera.

Patent, number 1,326,736, a Photographic Printing Mask, has been invented by Matthias Jettund, Seattle, Washington.

Samuel J. Sussman of Brooklyn, N. Y., has secured patent protection on his Photographic Developing Machine. Patent, number 1,328,305.

1,327,138 is a Camera-Attachment that has been invented by Henry J. Brown of New York City.

Sydney James Waters of Esher, England, has filed application in the United States for Reproducing Photographs. His application has been allowed and patent, number 1,327,931, has been issued to him.

Patent, number 1,323,364, Method and Apparatus for Recording Designations on Photographic Elements, issued to George J. Hood, Lawrence, Kan., assignor to Eastman Kodak Company.

Fallacies

THE lack of knowledge of its first principles is, as many of us have reason to know, a distinguishing feature of many persons who have to do with photography, says *The British Journal*. For our sins we were condemned the other day to the long and ungrateful task of trying to prove to the enthusiastic inventor of a camera-accessory that the mere device of attaching a finder to the lens did nothing towards showing the alteration of the picture on the plate when the lens was raised or lowered in relation to the latter. Failing the opportunity of ocular demonstration, the attempt was fruitless, but perhaps specific mention of the fact "in print" somewhere may bring conviction of the error to our enthusiastic visitor. Within a few hours of this incident we heard of a photographer of some experience gravely recommending the stopping-down of the lens employed in enlarging for the purpose of obtaining sharp enlargements of negatives which are out of focus. Cases such as this force one to the uncomfortable conclusion that many people get a knowledge of photography in a parrot-like way by assimilating isolated items of information without acquiring any real understanding knowledge of the elementary principles which are concerned in the formation of an image by a lens. In the absence of the desire or aptitude to come to such an understanding, apparently the most excellent of textbooks are useless to them.

Light for Retouching

AN expert in retouching writes very sensibly in *The British Journal* as follows: "In the days when I did a good deal of retouching I found it best to avoid any arrangement which allowed any light, however diffused, to fall directly on the negative, as it was always very trying to the eyes, and I maintain that retouching ought not to produce eye-strain if the negative is properly illuminated. I have often retouched till long past midnight without getting my eyes tired. The arrangement I have always used, whether the source of light was paraffin-lamp, incandescent gas, electric or daylight, allowed no light to fall directly on the negative, but was all sent upward through the negative by reflection from a sheet of white paper, or if the negative was extremely dense a piece of matte sheet-aluminium was used instead.

"Eye-strain in retouching is caused by trying to see every stroke made by the pencil. I believe that it may be almost entirely avoided by working at such a distance that each touch is not seen but only the general effect, working just as an artist does when he 'stipples' in watercolor or miniature-painting.

"Many retouching-desks are not sufficiently upright; the slope of the desk should not be less than sixty degrees. This will be found more restful and healthy, and will not cause the worker to stoop. This was the angle of the desks used by the mediaeval writers, who spent their lives writing at a time when writing was a fine art. I often wonder that men who spend their days 'pen-pushing' do not use a desk with a steep slope; they would get far less indigestion and have straighter backs."



WITH THE TRADE



Wanted—Technically Good Photographs

THE Bausch & Lomb Optical Company is in the market for pictures that are tests of real lens-efficiency. Satisfactory prices will be paid.

Speed-pictures or other difficult studies that illustrate the remarkable corrections, reserve covering-power and sharp, clear definition, given by the Bausch & Lomb Tessar series, are particularly desirable, whereas samples of work done by the Protars, a more convertible lens, are likewise solicited from the world of photography. Pictures of a timely and interesting nature are naturally the type preferred.

Glossy prints should be submitted for inspection and, if accepted, the company prefers to buy the negatives outright. The address to which all prices should be submitted is Bausch & Lomb Optical Co., 622 St. Paul St., Rochester, N.Y.

Photography with Soft-Focus Lenses

DURING the months of January and February, an exhibition of pictorial photography was given by The Camera Club, New York, comprising the work of Mr. Floyd Vail, F.R.P.S., some of which has been shown heretofore either in this country or abroad, but embraced mostly pictures entirely new. The original negatives were all produced with soft-focus lenses and illustrated the effectiveness of these objectives for artistic rendering.

The Graf Vicar Super-Anastigmat Lenses

THE Graf Optical Company, South Bend, Ind., successor to the Graf Lens Corporation, after devoting its entire energy to war-work for a period of two years, has returned to the manufacture of photographic lenses. It is now on a full production-basis specializing in anastigmat lenses and engaged in the manufacture of binoculars, prisms projection-lenses, lenses for surveying-instruments, magnifiers and other optical products.

Mr. Graf, president of the company, is one of the pioneers in the American lens-industry, and is the inventor and patentee of the Graf Vicar Super-Anastigmat, which took the experience of a lifetime to develop. Possibly, one of Mr. Graf's greatest achievements was the designing and making of the first F/4.5 anastigmat lens, using American glass exclusively. This was done for the Bureau of Standards, United States Government, after the United States went into war with Germany, and imported glass was no longer available. Anastigmat lenses of American glass for the Photographic Section of the United States Air Service were of the utmost necessity, and Mr. Graf met this need. His formulae were accepted and all lenses made for this most important branch of the United States Army were made upon his specifications.

Graf Vicar Super-Anastigmat Lenses are being made in speeds of F/3.5 for motion-picture Cameras F/4.5, F/5.5, F/6.3, F/7.7 for general photographic purposes, F/8, and F/9 for photo-engravers, diffusing-lenses F/4.5 and F/5.5 for portraiture and enlarging. A cemented lens of six elements, similar in construction to the Dagor, speed F/6.8, is also being made.

Transposing Lenses

WHETHER there is a difference in focal length if the single combination is placed before or behind the diaphragm-stop, is discussed helpfully in *The Amateur Photographer*. A great many of the anastigmats and rectilinears in use are composed of two more or less identical combinations, one on each side of the central stop; and, as everyone knows, lenses of such a kind are said to be symmetrical. With such instruments, it does not make any appreciable difference which of the two combinations is in front, except in one respect, but that is one which in certain cases is very important. Although nominally these two combinations may be of the same focal length, actually the foci can be precisely equal only by a mere chance; and it is long odds against this happening. The effect of their difference, as far as the complete lens is concerned, is that if the focusing-scale has been adjusted for a particular one of these combinations to occupy the front-position and the other the back, as must be the case, a transposition of the lenses will throw it out. The scale will no longer be accurate; and the photographer may blame his lens, or the adjustment of its focusing-scale, when all that is really wrong is that he has put the front-combination at the back and *vice versa*. In a few of the best types, one end of the lens-mount is marked, and a corresponding mark is put on the cell of the combination intended for that end of the mount; and this, one would think, might very well be done by all makers of lenses which are symmetrical. But, at present, most lenses are unmarked. The photographer who has such a lens will do well to make a point of never to remove both combinations at once. If the inner surfaces require cleaning—which should very seldom be the case if the lens is properly protected—one lens should be unscrewed, wiped, and replaced, before the other is touched. When it is necessary to remove both at once—which would arise only when the one combination is to be used by itself in the position generally occupied by the other—then, one of the combinations, preferably the back one, should bear some clearly recognizable mark to prevent any chance of a mistake.

A Hot-Water-Bottle Hint

A HOT-WATER bottle forms a very convenient appliance to keep anything warm for some time without risk of fire. Placed below a rack of negatives it will be found to assist their drying very materially. I do not know whether it is common knowledge that a saturated solution of hypo is much better than plain water to fill a bottle; but it is a fact. Sodium acetate is even better than hypo; but not very much. The hypo is more readily obtainable. The solution should be boiled and hypo added until there is no doubt that it will take up no more. The boiling solution is many degrees hotter than water, and keeps hot very much longer. Where a long, very moderate degree of warmth is all that is necessary, as, for example, in an outdoor darkroom, a hot "water" tin of this kind, wrapped in flannel, does very well.—J. CARRY, in *The Amateur Photographer*.



STORM
FRANCIS W. COWELL
THIRD LOS ANGELES SALON



PHOTO-ERA

The American Journal of Photography

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The Third Los Angeles Salon

ARTHUR F. KALES



ETHER or not pictorial photography may be hailed as one of the fine arts, has been a mooted question for lo! these many years.

Arguments, pro and con, have flown thick and fast; and the "casualties" have been heavy, until the word "art" has become as sweet music to some and as blasphemy to others. But to one whose judgment is influenced more by results than by figures of speech, the latest Los Angeles Salon furnishes, at least, evidence aplenty that—by means of photography—pleasing, beautiful and, oftentimes, artistic pictures can be made.

This far-Western exhibition of pictorial photography—shown for the third time at the galleries of the Museum of Arts and Sciences—is coming rapidly into prominence and as one of the important photographic salons of this country. It has blossomed forth into full bloom, and has become an established annual event. A great deal of credit is due to the exhibitors, and to the members of the Camera Pictorialists of Los Angeles under whose direction the show has been held; but the final stamp of success has been administered by the public at large, whose interest and attendance have more than justified the use of the galleries for the exhibition.

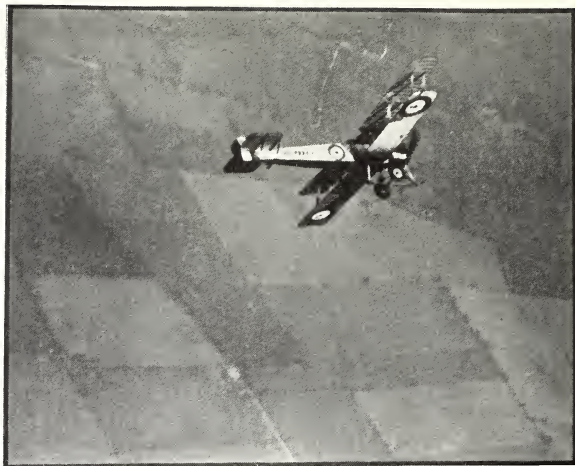
The Salons of the first two years brought forth many tried and true veterans to whom the Los Angeles exhibition was a welcome break in the journey to the pictorial "Happy Hunting-Grounds." There are still a few of the ancients at large who helped to found pictorial reputations a decade or so ago, but this year it is a pleasure to find that newer work is being shown; for most of the prints on the walls are of comparatively recent origin. This is refreshing, and stimulates interest in the show, to say the least.

Another indication of its growing popularity among exhibitors, is the presence of a strong foreign section. War-torn Europe is busy

enough with her own problems, and yet many workers from overseas have found time to send prints of exceptional interest. There are prints, too, from the Antipodes and from the Orient, and Canada as well. Truly, it is an international salon, much more so than any American show of recent years, to judge from a *résumé* of the various catalogs. As a whole, the exhibition has been thoughtfully selected and well hung. One finds very little excuse to question the judgment of the jury or the taste of the hanging-committee, and there are only one or two prints for which "hanging is too good."

Almost every known photographic process is represented. It is a veritable melting-pot. Carbon hobnobs with Gum, and both together look askance at Plebeian Bromide, the while Patrician Platinum sits aloof in haughty silence, serene in the conviction of her superiority. But just as new-world ideals are arising, Phoenix-like, out of the ashes of the old order, so are new photographic standards being raised. No longer can Platinum claim precedence because it is Platinum, nor Carbon and Gum demand homage as a matter of hereditary right. They must deliver the goods, or else make way for competing mediums of humbler origin which do show results.

In the past, we have been too apt to be impressed by the sound of so-called difficult processes. "Bromoil" slips glibly from the tongue, "Hand-Coated Platinum" and "Multiple Gum" carry a world of meaning; yet what crimes are committed at times under this barrage of high-sounding titles! Plain Bromide and Chloride, who are not gifted of the gods, must, indeed, reach perfection to obtain recognition in the face of ingrained prejudice, and the ability of California workers to make the most of what is popularly classed as a common medium, is in a large measure, responsible for the general recognition accorded the Bromides and Chlorides.



FLYING—BANKING

LIONEL WOOD

THIRD LOS ANGELES SALON

It is rather a noticeable fact that different parts of the country have developed a distinctive technique and a well-defined pictorial point of view. Certain distinct spheres of influence seem to radiate from different photographically active centers, and the consistency of their domination is quite remarkable.

Occasionally, we find versatility as to medium or technical rendering in certain individual exhibitors; but their pictorial viewpoint, or handling of subject generally betrays their photographic affiliation. As a case in point, one can safely wager that certain stunning carbons—which the catalog later attributes to W. H. Porterfield—never hailed from California, and by the same token, the clear, snappy bromides of J. N. Doolittle, E. M. Pratt and Ford Sterling never originated within the sound of Niagara Falls.

In fact, Pictorial America, like Caesar's Gaul, may be roughly divided into three parts—the Californians or Bromidians, the mid-westerners and near easterners of the Carboniferous tribe, and those disciples of the far east who worship at the shrine of Clarence H. White. Each of these three main divisions is strongly repre-

sented, and each in turn offers a nimble argument for recognition. When we add the foreign-ers, each with his own message in his own pictorial tongue, we have, in the final analysis, a Salon which offers to the seeker after truth a comprehensive view of all that pictorial photography is or pretends to be.

In making a general survey of the walls, one cannot but notice the variation in the carrying-powers of various prints, and particularly the relation of size to carrying-power, or the lack of it. Mere size does not seem to be the keynote. A few small prints seem to have compressed into their few square inches more of beauty and interest than others contain in a square foot or more. Also, some prints which catch and hold the eye from afar, prove a delusion and a snare on closer acquaintance.

This is merely a way of calling attention to relative strength. Inasmuch as this is an exhibition where prints are viewed at some little distance, one cannot but remark that, no matter how well hung or lighted, how few prints are convincing at anything more than arm's length. In other words, many workers have offered beautiful portfolio-prints which are not at all positive



THE BOAT-LANDING

W. H. ZERBE

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in effect when viewed from outside the railing. This feebleness is partly that of lighting, partly due to poorly selected medium, and somewhat to faulty or slipshod technique.

Workers in monochrome are denied the accent of color, and unless one constantly bears in mind that light and shade are the only accents at his command, monochrome may degenerate into monotone. This may seem hypercritical to some, especially those whose chief interest in a salon-review is the hope to find therein some favorable mention of their work. Nevertheless, it has long been apparent to the older, wiser and more earnest exhibitors, that the successful salon-print is one that commands attention first and fulfils expectation on closer inspection later.

Francis Cowell's "Storm" is a huge carbon which at once catches the eye, no matter what the spectator's point of view. Its strong, full scale of tone and brilliant contrast tell its story at a glance, and the only need for a more intimate view is to pick up and enjoy the minor shadow-detail and delicacy of gradation which,

unfortunately, will be lost in the reproduction. In this print, Mr. Cowell has expressed a definite idea. He had a theme in mind which he proceeded to work out to a definite end. Any disagreement must lie on the personal side only, for there is no disputing its claim to recognition as a "picture." This is not a plea for extreme size, for a smaller print of equal technical excellence would have been just as impressive, but it is more in the nature of a demand for deliberate intention on the part of makers of pictures by photography. We find too many prints whose meaning is obscure, if not lost. Many are so subtle in interpretation as to require explanation. Too few are forceful and direct, and tell their story at a glance. One may quarrel with many titles where there is only admiration for the work viewed merely as a print. As long as we brand this style of photography as "pictorial," let us at least have some regard for the fitness of things.

Among the foreign exhibitors, we find a more honest effort to be convincing. Strong, masterly



VANITY

HOLMES METTEE

THIRD LOS ANGELES SALON

photogravures from Spain, the work of Ortiz Echague, carbons and gums from Henry B. Goodwin of Sweden, and a number of bromides from England, furnish much food for thought. This overseas' work seems to be better planned, more carefully thought out, and less haphazard than much of our own work. There is less of an attempt to be sensational, and for this reason it may seem stereotyped to the casual American mind, but its soundness of conception overbalances most of the usual faults engendered by conservatism.

Strange to say, it has fallen to the lot of an Englishman to offer the most versatile single group on the walls. Lionel Wood has presented six prints which disclose a longer range of subject and medium than any other exhibitor. This is refreshing after variations of the same old tune in the same old key. There are workers who, year after year, have struck the same note in diminuendo, and in this age of progress, one welcomes a bit of jazz now and then. It bucks one up, so to speak. After five years of picturing the airplane as merely an instrument of modern warfare, it is rather a novelty to find the plane, and the element in which it travels, presented from a pictorial angle. Mr. Wood's "Flying—Bank-

ing" which is reproduced in this issue, is an unusually fine example of hair-trigger composition.

Mr. Goodwin's "Wet Hair" is a carbon in red chalk. Its title tells the whole story. The author set out to photograph wet hair and he has succeeded admirably. Let any doubting Thomas try to do likewise. In addition to solving satisfactorily a difficult problem in composition, he has produced a delicate and beautiful bit of modeling which is strongly suggestive of Hans Holbein in treatment and feeling. It is original in conception as well as in execution, and the original should be seen to be fully appreciated.

Following the London Salon of last summer, the British magazines devoted considerable space to the soft-focus lens. Various articles expressed the opinion that such a lens, used properly, had certain qualities which should recommend it to the British pictorialists. The use of a soft-focus lens—or some other method of softening—would have materially helped Andrew Barclay's "Circe." It is a technically fine example of clean British bromide work, excellent in its rendering of filmy drapery and flesh-tones. But, as a nude, it is much too all-revealing and lacks the atmosphere or spirit of illusion that is so necessary in works of this sort.



THE CARNIVAL-DRESS
JOHN HITCHINS STOCKDALE
THIRD LOS ANGELES SALON



NIGHT'S CURTAIN

W. H. PORTERFIELD

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Ortiz Echague's six prints are all interesting, and it is difficult to make a choice. Moro al Viento is perhaps the best, if we consider technical and pictorial qualities together. They are photogravures that possess all of the remarkable tonal qualities this process affords, and they have a brilliancy that quite deadens the prints that immediately surround them. The group, as a whole, furnishes a picturesque glimpse of Spanish national life, and this is perhaps an added reason for their popularity.

In the past few years, pictorialists—particularly those who specialize in portraiture—have experimented to quite an extent with artificial light, either as a principal source of illumination or as an aid to daylight. Many beautiful and interesting pictures have been produced in this way. These have been largely characterized by a boldness of mass which has added the element of pattern to the general interest of the subject. John Stockdale, in his "Carnival-Dress," has produced an excellent example of this type. Its technical qualities leave nothing to be desired. There is richness and detail in the shadow-parts that give a pleasing texture and serve to break up the heavy masses of the composition, and the delicate rendering of the other end of the scale

preserves the tonal balance in admirable fashion. In spite of its color—for it is a carbon in Payne's gray—it carries remarkably. The broad masses at the base and in the left-hand margin, together with the shadow at the right of the figure, furnish the motive of the composition. Without these, it would be commonplace.

We have spoken, elsewhere, of obscurity or irrelevancy of title. As long as titles are an essential feature, they must be regarded as either descriptive or as an announcement of the author's intent. "Vanity," as a title, is by no means new; but it always suggests infinite possibilities for the exercise of individual representation. But Mr. Mettee's print of that name seems sufficiently wide of the mark to justify reference to it as an example of the random titling seen so frequently. If we presume that the mirror—shown in silhouette in the left-hand margin—supplies the motive, then we are confronted with an at-once apparent lack of connection between it and the figure which is the center of visual interest. One stroke of the shears—and we have eliminated all reason for the title. The remaining figure does not suggest Vanity, in any way. It is, indeed, a young lady of attractive proportions in a rather strained pose



WET HAIR

HENRY B. GOODWIN

THIRD LOS ANGELES SALON

suggestive of the Russian Ballet. The print, itself, is excellent in its technical rendering; and if Mr. Mettee had gone to the Dance for his inspiration, it would have been beyond criticism, except for the elimination of the superfluous mirror.

As an opposite example, we might point to W. H. Zerbe's "Boat-Landing." Here we have a purely descriptive title and Mr. Zerbe's intent is quite obvious, or, at least, we may say that the reason for its acceptance may be more or less taken for granted, for the judges evidently saw in it one of those compositions whose sole reason for being is based on mass and pattern. A further proof that the author has been largely given credit for his intentions lies in the fact that, technically, it is not a good print. One must be satisfied with it purely as a bit of massive composition, and in this respect it is quite interesting. One may sacrifice beauty, if interest is sufficiently strong.

Both beauty and interest, however, are present in Louis Fleckenstein's "Nature's Shelter." From the time that Grecian shepherds tended

their flocks on the slopes of Olympus, peacefully grazing sheep have lent to any landscape a touch of pastoral beauty. Mr. Fleckenstein has caught his flock at a happy moment, and its presence in this stygian grove with its weird trees and dense shadows, excites both interest and wonder.

With space available for only a limited number of reproductions, it has been disappointing to have to omit such prints as Francis Libby's "Pathway of the Moon," a simple and effective nocturne, or Clarence H. White's "La Curieuse" which, aside from being a beautiful print, is one of the best nudes in the show. A tiny gum by Antoinette Hervey, and two other miniatures by Dr. Jaeger are also intensely satisfying, but, rather than a *résumé* of the catalog, it has been the intent of this review to give to the exhibitors some idea of the general appearance of the salon, and to those whose prints were not hung, some conception of the aims of the exhibition and the basis on which the prints were judged both by the committee of selection and by those who had the privilege to see the show on the walls.

The reviews of this and other salons in the



MORO AL VIENTO

J. ORTIZ ECHAGUE

THIRD LOS ANGELES SALON

past seem to have been inadequate, in this regard. Would that Diogenes, in his famous search, had brought to light a capable writer of photographic exhibitions, for a salon of any importance becomes more or less of a show-down, as does any serious attempt to comment upon it.

Criticism may be either destructive or constructive. The former is the easier and the less valuable. The latter is too apt to degenerate into flowers of speech or glittering generalities; and the reckless soul who ventures the middle course will find the way beset with rocks and shoals to bring him to grief. When that day comes, when there is some well-defined standard which governs the application of the term "art" to pictorial photography, then, and then only, will there be a common ground of understanding. This day cannot come too soon. It is by complete understanding that the critics, pictorialists and the general public will learn to love all that is beautiful in pictorial photography.

It is a pleasure to say, however, that this Third Los Angeles Salon is less far from this pleasant dream of Utopia than many other exhibitions. Each print that was hung was accepted because it met the exceptionally high standard set by the committee of selection. No reference was made to the name or reputation of the makers until the judging was complete. This, in itself, is a step in the right direction, and, in consequence, a visit to the exhibition is conducive of enthusiasm for what has been accomplished and hope for what the future may bring forth. A view of another exhibitor's prints is like a peek into the other fellow's world, and the chief result of this intimate excursion is a glow of satisfaction at the freshness of vision and sincerity of purpose that is reflected on all sides. Whether it be art or otherwise, the Los Angeles Salon proves conclusively that pictorial photography is a force to be reckoned with—a force that cannot fail to bring new happiness, beauty and love into our lives.



NATURE'S SHELTER

THIRD LOS ANGELES SALON

LOUIS EISENSTEIN

An Art?

FREDERICK C. DAVIS



Is photography an art? Every photographer who produces prints which are good, says that it is—because he chooses to call himself an artist. A photographer whose prints are mediocre has his doubts about it—because he wonders whether he will ever produce prints good enough for acceptance at the next salon. The photographer whose prints are indisputably bad, says it is not. I say it is not. What do you infer? You are right. First, we had better find out what art is, and see if photography fits the definition.

"Art," says Webster, "is the power or quality to perceive and transcribe the beautiful or æsthetic in nature." It is self-evident that the camera cannot be made to distinguish between the beautiful and the ugly; it is just as apt to record one as the other; and it is equipped to do so with utter impartiality. Also, the æsthetic is not material, and the camera has never yet been made to photograph visionary qualities. Moreover, in the hands of the photographer the camera cannot transcribe—it only records. That definition will not do, then.

"Art," says A. Ashleigh Snow, "enables one to translate the crude facts of life in a suitable manner to an atmosphere of refinement." But the camera cannot be made to translate. If there are crude facts before its lens, crude facts register themselves on the sensitive plate, and there is no translation—there is only reproduction. Useless definition!

"Art," says a distinguished art-critic, "is the imitation of the finest nature." And the camera is not an imitator; but merely a painfully realistic recorder. No; this is not the right definition, either.

"Art," says Emerson, "has not yet reached its maturity." How, then, could photography be art when art, according to Emerson, has not yet been fully revealed? Let's try another.

"Art," says W. R. Luhlaley, "is man's thought expressed in handwork." Is the camera's negative the result of handwork? Is the finished print the result of handwork? Basically, no, and far too often, yes, after the retoucher finishes with it; but then it is no longer a photograph. Let's try again.

"Art," says James A. McNeill Whistler, "must stand alone. Art is nature seen through a temperament." Can the photographer consider the cold, systematic, "law-abiding"

camera that he manipulates temperamental? No, no! Next!

"Art," says Birge Harrison, "is dependent on the past." The camerist in vain would photograph the past. He is confined unalterably to the present. Try another.

"Art," says Louis Foreman Day, "is only utterance." And the camera does not utter. It utters no more than a phonograph utters. The sounds that issue from the music-box are not utterances; they are reproductions of utterances. And so, also, is the camera's product merely a reproduction of an utterance, and not the utterance itself. The camera cannot speak—it can only reproduce. Wrong again!

"Art," says Hippocrates, "is long; life is short." The artist may possibly continue to produce works of art long after all life, except himself, has vanished. The camerist would have to photograph—space; nothing. Let's go on.

"Art," says Hare, "is the work of man done under the guidance and inspiration of a mightier power." Imagine injecting inspiration into a mechanical contraption! Imagine it guiding itself through its own consciousness! Nothing seems to fit.

"Art," says Sir Joshua Reynolds, "is not a mechanical trade." The camera is utterly and unalterably mechanical, physical, chemical, optical—all working mechanically. This is discouraging, to say the least.

"Art," says Theodore Child, "is nothing immoral." You are challenged to produce one work of art which is immoral. But witness the thousands of photographs of "bathing beauties" and of "beach-sirens," of "artistic photographs draped and in the nude." Is that not immoral? Is not the attempt to produce art by photographing immoral subjects, immoral? More so when there is no art there to produce, and when it is impossible to produce it? No; that won't do.

"Art," says Symon Haden, "is innate—it cannot be acquired." Yet how many hundreds of photographers spend vast sums buying more expensive apparatus, in the belief that, with its acquirement, the ability to produce art is theirs! Hum! That's no better than the others.

After all those definitions, what is art? I ask you, what is art? More, what is the answer to the question, "Is photography an art?" Clearly, photography does not fit any of these definitions, and yet such definitions are all that can be had.

And to top them all off, here is the most explicit and truthful definition:

"Art," says Goethe, "is art." Thank you, Mr. Goethe, you've cleared it all up!

But the real definition of art, the one that is indisputable, is:

"Art is nature carried to a higher power by reason of its passage through a human consciousness," says Claude Bragdon.

And there you are! Art is simply one thing—interpretation. That is certainly it.

The painter, seeing his model before him, *interprets* the mood and places the translation on the canvas. The sculptor, viewing the shapes before his eyes, *interprets* the emotion, and shapes the translation in the clay. And so it is—art consists in interpretation through a consciousness, and the camera has no consciousness, and neither can it interpret, but it can be made to reproduce. That is clear enough!

There is no great work of art in existence in which are not broken some of the hard and fast rules laid down by modern pictorial geniuses. The real genius of years gone by knew no rules. He interpreted as the interpretation was. There were no laws which compelled obedience. But in photography —!

The light-rays, obeying optical laws, pass through the lens. The diaphragm-stops control the volume of light. The shutter, obeying mechanical laws, gives the correct exposure in relation to the stop. The emulsion, obeying chemical laws, is affected. The developer and fixing bath, likewise obeying chemical laws, act. The wash-water, obeying physical laws, cleanses. All complete the process. It is the same with printing. Laws, laws, laws! With such strict, unbreakable laws, there can be no art.

By photography is meant photography. That is as clear as Mr. Goethe's statement. It does not mean handwork on the negative or print. The retoucher eradicates the defects of nature, and technical exaggerations, and the result is no longer a photograph. It is not a drawing—

neither is it a sketch, nor a painting. It is merely a picture. It is a picture obtained by photographic means; but it is not a photograph. We see few, very few photographs!

Most certainly, and, as surely as the arrangement of the paints on the canvas is art, and the arrangement of the modeled clay is art, just as surely is the *arrangement* of the photographic subject, art. That, assuredly is art. But a photograph of it—is it art? No, it is a photograph of art. It is a reproduction of an artistic thing; but it is not art.

If photography, then, is not an art, what is it? Is it a science? There are seven sciences, and photography is not named as one of them. It is a combination of sciences, and the result is what? Merely a process! Photography is nothing more or less than that—a process! It is very, very hard to say that, as much as I love photography; but it is true nevertheless. The production of artistic pictures by means photographic consists of exactly the same principle as the geometric limit.

Did you ever hear the story about the frog on the log? He was at one end and desired to journey to the other. So he jumped half-way. Then he jumped again, and jumped half of the remaining distance. He then jumped again, and traversed half the distance left, and so continued to do this. The frog never reached the end of the log. He never has and he never will. No matter how often or how long he jumps, he has still a slight distance—half of the distance remaining from the previous jump—to travel.

And so it is with photography. It is not art, and it is impossible to produce a true photograph that is art. Like the frog, it may get closer and closer to the goal; but it will never reach it. The product may *approach* art—but it will never *be* art.

And now, notwithstanding that all our "artistic" photographers are objecting strenuously, will we ever say that photography is an art?

No, sir; we will *not*!





LOOKING DOWN ON FIGEAC

HERBERT B. TURNER

Odd French Corners for the Camerist

HERBERT B. TURNER

(Continued from March)

FROM Cordes or Albi our route takes us north, for we are now headed Paris-ward, but by a line seldom traveled by the tourist. This is a good indication that it is interesting; but lack of space forbids a description of the next eighty miles between Cordes and Rocamadour. This distance will take several hours to do by train as the French run them.

I suggest that a stop be made at Figeac, fifty miles from Cordes, where a hotel is to be found above the city, close to the railway station (the Hotel Lajoinie, I think, is its name).

Figeac, which dates from 755 A.D., lies in a cup-like depression among the hills and, to-day, has a population of about 6,000. The country about the town is thick with graceful poplars, so loved by the artist, and so typical of France.

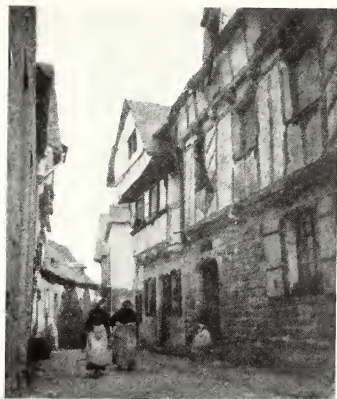
The church of St. Sauveur, in the center of the town, of the eleventh-fifteenth century, I raved about—a magnificent Gothic structure with some fine, modern glass-windows. The crooked streets, the byways, the odd nooks and corners, and thirteenth- and fourteenth-century houses furnish picture-material at every hand.

I found that the district away from the center of the city was the most impressive from a photographic standpoint, especially, that part that "sprawls" itself up the side of an adjacent hill. Here, delightful pictorial compositions may be found—the high-plastered, flower-covered wall bordering the ascending lanes, for a foreground; the soft brownish, pinkish or blue-toned homes in the middle-ground with their dull-red tiled roofs set off by the foliage of their gardens; and the background made up of the city in the hollow, with its gray-brown church-towers and graceful poplar-covered hills beyond. I should like to revisit Figeac with a soft-focus lens, for the place lends itself to such a rendering.

From Figeac, a train-journey of thirty miles northward brings us to the station of Rocamadour situated in a desolate country. Here an omnibus is taken for about two miles to one of the weirdest and most fascinating towns of Europe—a veritable town of cliff-dwellers. The place is named in honor of St. Amadour, who settled here in the first century, making a sort of hermitage of it. St. Amadour is said to have been Zacheaeus, the Publican, a disciple of Jesus,



STREET-SCENES, FIGEAC
HERBERT B. TURNER



OLD HOUSE, FIGEAC HERBERT B. TURNER

who, after the crucifixion, joined with others, among whom was his wife, St. Veronica, in an expedition to evangelize Gaul. They settled first at Soulac, where they Christianized the surrounding country. Here St. Veronica died, and St. Amadour journeyed north to continue his work in central France, founding an oratory in what is now Limoges. Later he settled at Rocamadour, where he died.

The omnibus, on leaving the station, proceeds over a rather flat country, not very interesting in aspect, which gives no hint as to what is to come. At length, we reach a little stone-chapel of ancient date, and a few feet beyond the traveler finds himself on the brink of a precipice whose walls drop over four hundred feet to a narrow, but vividly green, bottom below, under which a subterranean river makes its way. This little valley is but a few hundred feet wide; for directly across is another precipitous cliff of nearly the same height.

Hanging directly below—like a series of birds' nests, about midway high between the valley and the plain above—is Rocamadour, a rare collection of houses of the fifteenth century, with a church looking very much like a château, and a series of five protecting fortified gates. The town has now a population of a little over one thousand people, although at one time it was somewhat larger. The omnibus descends by a zigzag road of steep grade cut out of the side of the cliff, and enters with care the first town-gate,

for there is not much room to spare; and almost at once stops at the Hotel du Lion d'Or, a comfortable inn, on the main street. The main thoroughfare of Rocamadour runs along a sort of shelf above the valley and is lined with charming, picturesque and ancient plaster-and-stone houses with high-pitched roofs covered with old tiles of a rich garnet-color, spotted with gray lichen and green moss. Above, hanging to the sheer rocks, are tiers of other mansions and the odd-looking early Gothic church of St. Sauveur, the crypt-like chapel of St. Amadour under it, and incorporated in this strange medley of holy edifices is the Chapel of the Virgin, a miracle-working sanctuary of early date. The mansions and sacred buildings are reached by various flights of steps. At the very top of the cliff, high above all, is an old château—now the summer-residence of a bishop—which commands from its parapet a wonderful view of the ravine-like valley, the roofs of the town and the country for miles over the plain above.

As there are a number of trees and shrubs on the cliff-sides, the color-effect of this strange abode of man is rich—the green, the garnet-tiles, the browns and grays of the houses, and the almost white-gray of the rocks make a picture never to be forgotten. Across the narrow val-



ANCIENT GATES

HERBERT B. TURNER



REAR GATE, ROCAMADOUR

HERBERT B. TURNER

ley rises the other wall of rock, splashed with the green foliage. The underground river keeps its roof—the valley-bottom—emerald in tone and like a lawn. The poplar and other trees are sprinkled through the valley in picturesque order.

As I have said, the clustering religious buildings are reached by well-worn steps—alas! many of them—which terminate in a sort of court over which the cliff hangs threateningly. Here, directly beneath the cliff, is a chapel, the exterior wall of which has a huge sword thrust into it, a copy of Roland's famous "Durandal," which was bequeathed by him to the Virgin. The original sword was stolen from the spot in the twelfth century.

Next, to the right, is the church proper, partly hewn out of the cliff, containing frescoes of some of the noteworthy pilgrims of the past who visited this shrine, including St. Louis, Robert d'Artois, Charles d'Anjou, Alphonse de Boulogne, who came here in 1245, and Louis XI. with the date 1463, besides a number of kings from the northern countries. In the crypt of the church is the chapel of St. Amadour containing the good man's mortal remains. Attached to the outer end of the church, and forming the third side of the court, is the exquisitely decorated chapel of the Virgin, the inner walls of which support silken banners and tablets of

marble, votive-offerings from those who have been miraculously cured here of their infirmities. Rocamadour is one of the oldest pilgrimage-resorts of France, much frequented in mediæval times. Small wonder! for, with its unique situation in a lovely ravine, it is altogether charming.

The camerist will desire first of all to descend to the bottom of the valley by the trail-like road, and record the town as it is seen hanging to the cliff. Next, he will ascend by another road to the opposite wall, and obtain the view from there. Descending, again, he will be sure to cross the valley to the road at the other end of the town, passing on his way a charming, ruined stone-mill amidst a clump of poplars. As the road ascends to the main street-level, he will come upon the rear gate and find it, perhaps, the most picturesque of the five.

Rocamadour is worthy of some stay, for the lure of its situation and its life grow upon one. Among other inns is that of Hotel Ste. Marie, which, although up the long flight of steps almost flush with the church, is neat and homelike, and has a garden-terrace that commands a view of the valley. I have been able, here, to give only a brief outline of this interesting "cliff-dwellers'" home, without going into details, for I have one more picturesque city to mention.

However, before proceeding, I must mention



TURRETED HOUSES

HERBERT B. TURNER

two extensive and remarkable caves, one the Grottos of Lacave, twelve miles to the northwest of Rocamadour, and the other the Gouffre de Padirac, about ten miles to the east. The latter impressed me the more. One finds in a field a great natural jug-shaped well, three hundred and twenty-four yards in circuit and two hundred and fifty feet deep. When one descends by an iron-stairway, one finds himself in a sort of colossal wine-urn, for the top is smaller than the bottom. At one side of the bottom is a sort of drain-hole which is descended by many flights of steps until a long cavern is reached. Following along this for several minutes, one comes to an underground river. Here a boat and attendant are found ready for a trip along this Styx-like stream through an awesome silence until, in about a dozen minutes, a lake is entered. Landing on the opposite shore, one enters a series of grottoes, the grandest of all, the Salle du Grand Dome, being three hundred feet high and one hundred and sixty-five feet in circuit. The whole place, from the cavern-mouth, along the river, and throughout the grottoes, is a series of great grotesque stalactites, that resemble monster cauliflowers—thirty feet or more in height—mushrooms, sponges, deformed trees, jelly-fish with trailing tentacles, wet blankets, phantoms, gargoyles and everything a feverish nightmare could produce. The place is lighted by electricity. I have no doubt that the French authorities would send one a permit to photograph it

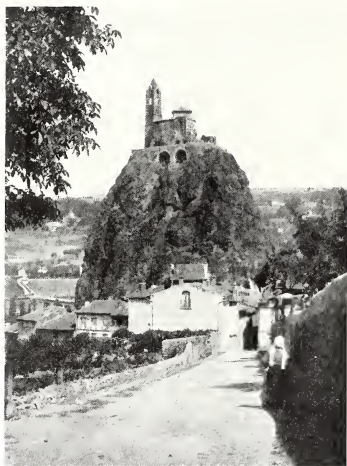
by flashlight, if the request were made properly through the U. S. Consul General at Paris.

Now, I am going to take you on a long journey. We will leave this railway-route to Paris by returning to Figeac and crossing over to another Paris-route by the way of Aurillac, Murat, Arvant, and thence down to Le Puy. I have not the space to describe the route, so let us assume that we have arrived.

Le Puy should, by no means, be missed by the lovers of the picturesque. Once more we are upon a strange scene, more weird than any we have as yet encountered, for we are in the heart of what was once a great volcanic basin from which rise three crag-masses about which the city of Le Puy and its suburb of Espalay are clustered. The higher projection, known as Mont Anis, rises almost from the center of the town, which has a population of twenty-one thousand. Half way up its slope stands the Cathedral of Notre Dame. It dates chiefly from the eleventh and twelfth centuries, is very odd to look at and, altogether, remarkable inside and out. At the very summit of this volcanic rock, which rises four hundred and thirty-five feet above the town, is a fifty-foot statue of Notre Dame de France, composed of the metal of over two hundred Russian cannon taken at Sebastopol. Naturally, the statue—above a warm-gray city with red roofs—stands out sharply for a great distance; but this is not all, for just on the edge of the city another projection of volcanic origin,



VIEWS OF ROCAMADOUR
HERBERT B. TURNER



ST. MICHEL D'AIGUILLE, LE PUY

HERBERT B. TURNER

resembling a stubby finger, pushes itself out of the earth to the height of two hundred and eighty feet, and perched on its top is the church of St. Michel d'Aiguille, built in 962, and reached by a series of steps, said to be two hundred and seventy-seven in number, cut out of the rock. The church is an architectural curiosity.

In the center of Espalay, which is a part of Le Puy, is still another one of these freakish shafts, upon which stands a colossal statue of St. Joseph and the Child. Thus you have Le Puy, a city of theatrical aspect, set in a charming, bowl-like depression, rimmed in by hills—a bowl filled with cultivated fields, very pretty, smiling and peaceful. Le Puy is very old, dating well back into Roman times. In mediæval days it was a pilgrimage-town like the Rocamadour and Lourdes of to-day. The streets, the byways, the various churches, the houses with their carved doorways and windows, and now and then a turret, offer the pictorialist a feast of composition, let alone the queer setting of the place and the vast panorama from the hills which are easily reached.

Now I will leave the reader to journey to Paris via Clermont Ferrand, Bourges, Tours and Orleans, all interesting places filled with things delightful to photograph; but too well known to need description.

Before closing, I wish to say that nearly all the pictures that accompany these articles are from negatives made with a Richard Verascope (Stereoscope) 4.5 x 10.7 m.m. fitted with Carl Zeiss Ic Tessar lenses and enlarged to 5½ x 7 inches on Artura Carbon Black. That means that one of the two sides of the stereoscopic negatives was chosen and enlarged from 1 9/16 x 1 14/16 inches either by a Voigtländer Collinear or Wollensak Verito lens as the whim seized me. The negatives, of which I made hundreds, were on Eastman Extra Rapid and Orthochromatic Plates—an English Eastman product easily obtainable by one *en route* from the Paris, Milan, Madrid or London headquarters of the Eastman Kodak Company. The development was by tank and pyro-powders were used for developer. On my visit to Carcassonne, Albi, Cordes, Figeac and Rocamadour, I very foolishly had only this one camera with me. At Le Puy I had a 3 A Special Kodak with a Carl Zeiss II B Tessar lens, in addition to the Richard Verascope. A stereoscope is without doubt the ideal instrument to record one's wanderings, but it does not lend itself so well to pictorial work as an ordinary camera, to my mind, because of the size of plate, the proportions, and the habit one forms, of favoring the stereoscope by including foregrounds to emphasize distance.

The cost of a trip, as I have given, is considerable in normal times. The railway-journeys are comparatively short, and, if one will travel second-class, or even third, the cost is of no great financial importance. The hotel-rates were from two to three dollars a day, American plan. In normal times, the franc is worth 19 cents; to-day it is worth less than ten cents. Thus if the hotel-rates have risen from fifteen francs to thirty, the cost in American dollars would be the same as in 1914.

I would advise anyone traveling abroad to become a member of that large organization, the Touring Club de France. The dues are one dollar and a quarter a year; but the printed matter furnished, together with the discounts to members at hotels, will more than repay one the small expense. They have an invaluable guide-book to hotels.

Speaking of guide-books, the series known as Guides-Joanne—for those who read French—is the most comprehensive and entertaining in print, far superior and more voluminous than anything in English.

Remember that outside of London, Paris and a few favored tourist-centers, rooms with baths are not to be had; and, at their best, hotels situated in such places as I have described are merely inns. They are quite plain and even primitive,



ROCK OF ST. JOSEPH, LE PUY

HERBERT B. TURNER

but altogether delightful, comfortable, and they have a charm that cannot be duplicated in America. Moreover, the food and the wine are certainly very superior. The ideal time to make the trip is during May and June.

One last word. The seasoned traveler avoids Grand Hotels—I mean the international hotels that cater to cosmopolitan Europe and America—and seeks those hotels which cater directly to the people of the country he is traveling in—French hotels in France, Italian hotels in Italy, and so on. It is a good rule and adds much to one's enjoyment and comfort. It is likewise a distinct saving in the cost of travel.

For the benefit of those readers who are unacquainted with the required procedure to obtain a passport, I will state briefly the present regulations as I understand them to apply to the tourist. A person who desires to leave the United States must write three weeks or more in advance to the Department of State, Washington, D.C., for application-blanks for a passport. The blanks may be obtained also at the nearest Federal Court or Customhouse.

After answering the questions on the application-blank, the prospective traveler must go to the nearest clerk of a Federal Court or agent of the Department of State accompanied by a witness who is a citizen of the United States. This witness must be a person in good standing in an established business or profession and must have known the applicant at least two years.

With the application-form a birth certificate

or naturalization-papers—must be submitted and a letter, on business-paper from some person who has known the applicant for over two years, which gives the applicant's status and his good citizenship. To these papers must be attached three photographs of the applicant printed on thin paper, unmounted, and not over three inches high.

The clerk of the Federal Court will take the oath of the applicant and of his witness and forward the papers to Washington. In due time, if the application is satisfactory to the Department of State, the passport will be issued. However, there is still another important point to be remembered. A person who desires to leave the United States must obtain a permit from the Federal Income Tax Commission of his district. If the applicant's income-tax is paid to date and filed properly, the required permit will be forwarded. On receipt of the passport it must be viséd by the nearest consuls of the countries one wished to visit.

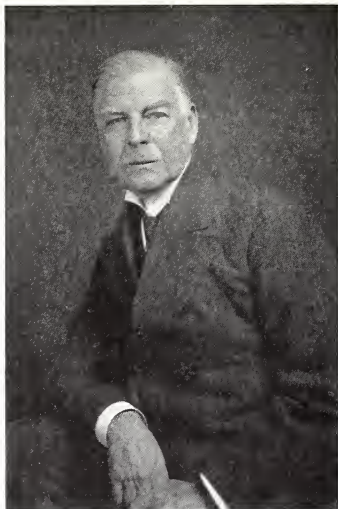
One thing more: a foreign lens or foreign camera should be registered at the nearest Customhouse and the registration-receipt carried with one's other papers. In addition to the passport, the Federal Income-Tax permit, which must be exchanged at the port of debarkation for a sailing permit, the Customhouse registration-receipt, and extra birth-certificate, the traveler should carry several letters of identification. It is always well to be prepared for any eventuality these days.

The Quartz-Meniscus Lens

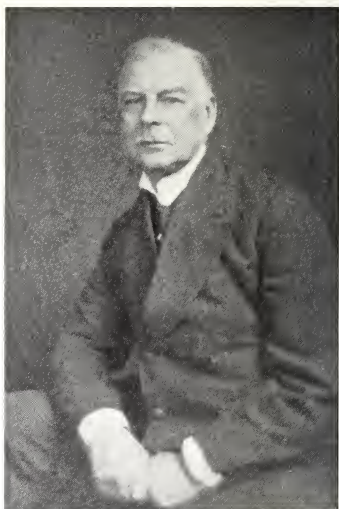
T. W. KILMER

FVER since Dr. D'Arcy Power, of San Francisco, wrote his able article regarding the wonderful qualities of the rock-crystal lens, I have been experimenting with one of these little lenses along the line of my favorite hobby—namely, portraiture. In the following ex-

scientific and therapeutic apparatus, in New Jersey, and the same makers that had furnished Dr. D'Arcy Power with his quartz-lens. The lens is of four and one-half inches focus, and works at about $F/4.5$. I have a well-known make of anastigmat lens, also of four and one-half inches focus, that works at $F/4.5$. I thought that it



(a)



(b)

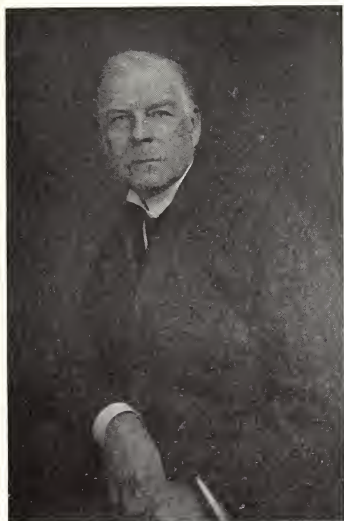
FIGURE 1

periments, artificial light only was used. This illumination consisted of four fifty-inch Cooper Hewitt Tubes, each tube screened by one thickness of architect's tracing-cloth. Bottom of tubes are six and one-half feet from the floor. Sitter was placed eight feet from light. All the experiments were conducted at night, and there was no illumination except the Cooper Hewitt tubes, as stated above.

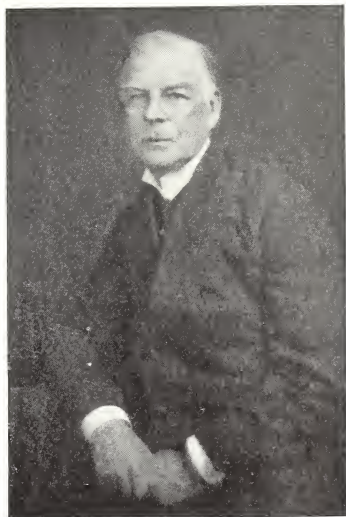
The quartz-lens which was lent me by Dr. E. L'H. McGinnis, of New York City, for a thorough test, was made by a firm of makers of

would be a fair test if we tested these two lenses, lens for lens, using the same illumination, the same shutter—which is a Compound Shutter, and is accurately tested for correct speed—the same plate—Stanley, $3\frac{1}{4} \times 4\frac{1}{4}$ —the same time, development, and printing-medium. This I have done, as is attested by Dr. McGinnis, who very ably assisted me in all the tests, and really had by far the hardest task, as he kindly offered himself as model.

The camera was placed six feet in front of the sitter. The first test consisted of using the anas-



(a)



(b)

FIGURE 2



(a)



(b)

FIGURE 3



FIGURE 4
T. W. KILMER



FIGURE 5

T. W. KILMER

tigmat and the quartz, each at an exposure of one-half of a second. The results are shown in Fig. 1, (a) and (b). In (a) we have a fully-timed negative, and in (b) an overexposure. Our only inference is that the quartz is faster than the anastigmat.

Our second was to give both plates an exposure of one-fifth of a second, as shown in Fig. 2, (a) and (b). The anastigmat was underexposed, whereas the quartz was correctly exposed. Once again, the only conclusion is that the quartz is faster than the anastigmat.

Our third test was to give an exposure of one twenty-fifth of a second. In Fig. 3, (a) and (b), we see the result—the anastigmat is barely discernible, whereas the quartz shows a fairly good impression recorded on the plate. Both heads are somewhat enlarged from the original $3\frac{1}{4} \times 4\frac{1}{4}$ negative. Here, again, and for the third time, we must confess that the quartz lets more

light through in one-twenty-fifth of a second than does the anastigmat and, therefore, is to be considered faster. The quartz-lens, used for enlarging, gives very pleasing results; indeed, they are so pleasing, that we are almost compelled to say that they are the best we have ever seen. In Fig. 4, we have an 8×10 enlargement of a $3\frac{1}{4} \times 4\frac{1}{4}$ anastigmat negative. I have used nearly every type of lens in enlarging this same negative, and I must say that, to me, the quartz-lens is the one that pleases me most. There is no flare, no halation, even though the lens is used at its full aperture, $F/4.5$. There are a roundness, atmosphere and modeling which are beautiful. As an enlarging-lens, the quartz may be stopped down, when all degrees of softness and diffusion are possible.

The other evening, when it was virtually night, 5.15 o'clock, and cloudy, in February, I made some exposures out of doors that varied all



FIGURE 6

T. W. KILMER

the way from $1/100$ down to $1/5$ seconds. All were overexposed! I am appending a view made in Central Park, yesterday, virtually under the same conditions. You can see the result, as shown in Fig. 5. As a final test of speed, I made an exposure towards a dark patch of trees, at full aperture, in one-fifth of a second. This was made even later than the others, and shows a result that I never would ask my best anastigmat to try to duplicate, in regard to speed (Fig. 6). I know from past experience that my anastigmat could not get a fully-timed negative under the same conditions. We find that in using this quartz-lens, that for a focus of four and one-half inches, it is best to employ a plate or film of not over $3\frac{1}{4} \times 4\frac{1}{4}$ inches. The reason for this is that, when a quartz-lens of four and one-half inches is used on a plate or film larger than $3\frac{1}{4} \times 4\frac{1}{4}$ inches, there may be a small amount of linear distortion at the extreme edges.

The makers of this lens inform me that they are now making a quartz-lens of two-and-one-quarter-inches diameter and eight-inch focus. For any one who enjoys pictorial work, both in the making, and also in the enlarging, it seems to me that the quartz-meniscus lens is a means

worthy of employment by the progressive worker in pictorial photography who seeks to find a new means of expression.

Just a word about how this article came to be written. As already stated, it was Dr. D'Arcy Power's article in a photographic magazine that aroused my curiosity. Dr. McGinnis communicated with the makers of the quartz-crystal lens and had one made. However, when he received it he did not know just how to go about it to test the lens and he called upon me to aid him. This I did gladly, and the more we experimented the more enthusiastic did I become. Obviously, an attractive girl would have been better suited to pose for the tests, but none was available and hence Dr. McGinnis volunteered to do his best in the circumstances. The manipulation of the camera, the lighting-arrangements, the developing and the printing were all done by myself in the presence of Dr. McGinnis who can vouch for the truth of the statements made in the article and who aided me in making the experiments. [The quartz-meniscus lens is called the Hanovia Soft-Focus Lens and is made by the Hanovia Chemical and Mfg. Co., Newark, N. J.—EDITOR.]

Fancy Lighting in Portraiture

N. E. LUBOSHEZ



MR. LUBOSHEZ, at the outset, declared emphatically that he had never believed in so-called "fancy lighting" in portraiture. It was, as a matter of fact, fancy shading, and, where it was indulged in, it was undoubtedly at the expense of the likeness. Pointing to the walls, on which he had hung many examples of portraiture recently made by fancy artificial lighting, the lecturer caused some amusement by stating that what appeared to be portraits of half-a-dozen ladies were, in reality, portraits of one lady only—"and not one of them like her." These were shown to demonstrate how a likeness could be ruined in the production of a "good picture." "Fancy lighting" generally meant lighting from behind or from the side. A good deal of discussion had taken place as to the proper direction of the lighting and also as to its source, some workers using reflectors, some diffusing the light, and some, again, mixing several lights of varying strength. Only one photographer, Pirie MacDonald, of New York, who was also a great artist, had succeeded in applying fancy lighting in portraiture, and Mr. Luboshez would attribute the success to Mr. MacDonald's ability in posing and obtaining expression rather than to the lighting. A good way to study this kind of lighting was to watch the effects produced by the kinematograph, where the important point of having sufficient light in the shadows always had to be taken into serious consideration. The change of effect could be seen when traveling in a railway-carriage. With the aid of a member as sitter, the lecturer showed how fancy lighting was obtained with a strong sidelight, or with "stage-lighting"; but again he emphasized the fact that he used straight front-lighting for good portraiture. The fundamental principle was to have enough light in the shadows, and this was achieved best by using a front-light at varying distances and of varying strength. "All these are absolute rubbish!" said the lecturer, pointing to a number of portraits made by fancy lighting. "One might as well have made a portrait of a flower-pot." Some of the sitters looked like negroes, he said, when, in fact, their complexion was not dark, at all. Yet for making such pictures, men won medals! A portrait that would give a real likeness must be made from only one light-source, large or small, far or near. No great painter ever achieved a better portrait by using fancy lighting. He challenged anybody to name one who made fancy portraits in

this way. Yet there were many photographers who seemed to think that they were Raphaels or Rembrandts because they did it. Surely, it would be better for photographers to imitate the vast majority of painters of all ages. In traveling about the world, as he had done, nothing had given him more pain than to see, not how photographers made mistakes, but what keen pride they took in the making of them. It was a tragedy to see so many youngsters who had no knowledge of drawing indulge in fluke photography which they considered "rather good." Much current criticism of photographic work also was very misleading and confusing. There had been much nonsense talked about tonality. He was afraid that there would have to be a radical change before portraiture by photography reached a high standard; but at the same time there were indications of improvement. Tonality alone would not give a good likeness. At this point he passed around a "fancy portrait" of Mr. C. P. Crowther, which was undoubtedly a fine picture, but which the lecturer condemned as a bad likeness. He also showed a large number of beautiful prints, explaining that they were poor portraits, and described in detail how he produced at Stockholm a very striking portrait of a distinguished gentleman which had been acknowledged to be a real work of merit.

In good portraiture, he pointed out, real success lay in simplicity, directness, and absolute control of technique. After many years' experience, the knowledge of what to do came automatically. When he was exposing, he liked to look at his subjects, not at a watch. There were many who tried to get real art into their results, and failed to accomplish this because they did not do enough plain photography. The continual moving about of curtains and screens and other properties was only a cause of confusion. Photography was an art and a science, but he assured them that the less confused it was with art, the more truly artistic it became. The important thing was to study human nature and also the work and methods of the greatest painters. Simplicity should be aimed at, and this meant that there should be no waste of energy over accessories in the studio which were more of a hindrance than a help. There was art in photography which was dormant. It seemed to wake up years ago, but fell asleep again; and to its reawakening he hoped that what he had urged might in some small way contribute.

The Photographic Journal.

The Photographic Industry in Germany

M. A. R. BRUNNER

THE past year, 1919, has been for the German people a very trying one, filled with endless troubles and suffering in spite of the fact that the actual hostilities had already ceased in 1918. The whole economic life stood, and still stands, under the unbearable influence of the lessened value of the money or its steadily diminishing purchasing-power. The consequence is the enormously high price for actually anything imaginable—the increased wages, the higher expenses in trade and in industry. This year will bring in addition the much higher rates and taxes, and the heavy extra war-tax for any one who possesses more than 5,000 marks.

One of the most dreadful things is the unusually low state of the German "valuta." Among other things, it caused actually fantastic prices of cameras, plates, papers, lenses and other photographic accessories. But there are other difficulties, such as the scarcity of gold and silver, potash and minium (so indispensable to the manufacture of glass plates), and the scarcity of coal which caused the closing of hundreds of glass-factories. One square meter of ordinary window-glass costs now from 35 to 40 marks, whereas the pane of a show-window requires an outlay of 1,000 to 1,500 marks. This applies only to raw glass, whereas the workshops of photographic articles have further increased expenses for the chemicals, papers, leather, copper, brass, aluminium, wages and freight. Many materials cost now ten times the ante-war price, and silver twenty times as much. For the first months of this year the prices will certainly continue to rise. If the state of the German valuta does not become better, a gradual adaptation to the world's market-prices probably cannot be avoided in the interest of the whole economic life.

Before the war, Germany had exported a remarkable amount of any kind of manufactured products, and is now more than ever obliged to follow this course in order to buy food and raw materials. Owing to her proximity, Russia has been a heavy buyer of German goods, and now efforts are being made to resume the business-relations with her. With the consent of the German and Moscow governments, representatives of large concerns have gone to Russia, in order to obtain information as to the basis upon which a future exchange of goods would be possible. In 1913, Germany exported to her big neighbor 90,800 kilograms of cameras and lenses, valued at 2,307,000 marks; 211,200 kilograms

sensitized paper to the value of 760,000 marks and 22,900 kilograms of films valued at 1,222,860 marks. These are high figures, and it is natural that Germany should try to continue the export, as, until recently only, Great Britain had the advantage of the interrupted trade-connections between Germany and England, for she fostered intensely the Russian market and granted export-licenses for photo-materials to Archangel and Murmansk.

But even the Entente countries are a good field for the German industry. At present, a lively export is taking place to Italy which, before the war, was one of the best buyers in the photographic field. The resolutions of the Paris economical conference, which practically amounted to shutting off the German empire from purchasing raw material even after the war, and to flood her instead with finished products, are not to be taken seriously, as they are the outcome of blind hatred, and not of sound business-sense. Besides, we know that in North America a strong movement is noticeable not to take part in boycotting Germany after the war, for these two countries depend too much one upon the other. In France, however, the tactics of complete shutting out of German goods is followed. Still, it is not feared that French products will seriously compete with our own goods, as, in spite of all her efforts, France will scarcely be able to produce a capable exporting industry. Not to be neglected is the competition coming from Belgium, especially in papers and dryplates; on the other hand, that country is not in a position to erect a wall against German articles, as these are rather important for Belgium's trade. In England, great efforts are being made to keep down the American competition; the attitude towards Germany takes only the second place. But as Great Britain, owing to the blockade, has accumulated during and after the war an immense quantity of raw materials from most overseas countries at low prices, she is able to supply her industries with these cheap materials, and therefore also the finished products can be manufactured at reasonable prices, which cannot be said of many countries, even of those of the Entente. The German industry, therefore, will have difficulty to compete with British photographic products, especially if that nation introduces the system of protective tariff.

We pay much attention to the American competition, for the United States is obliged, for many reasons, to increase her exports. Large

export-societies have been formed furnished with large capital, which are beginning a peaceful, but still heavily felt penetration of Europe. There is a possibility that also Germany is or will be flooded with masses of American photo-articles, and it is now the question whether these can compete with ours as regards prices. For the German industry the question is where to find a place in the world's market. The German industry cannot exist without export, now even less than before the war. The eyes are especially directed towards South America and Eastern Asia which countries were shut off more or less from the world's traffic during the past years; but during that time had a chance to accumulate great wealth. But there exists no doubt that only a narrow way remains open to the German industry, since Great Britain and France have the firm intention and also the power to hinder the development of the former. The neutral nations, therefore, will probably become the best customers. The German government, of course, must do everything possible to remove the existing export-barriers. For instance, it is futile to restrict the export of photographic papers in the interest of certain industrial branches, as has been done. There have been complaints as to such prohibited exports, which happened from time to time to the detriment of the industry.

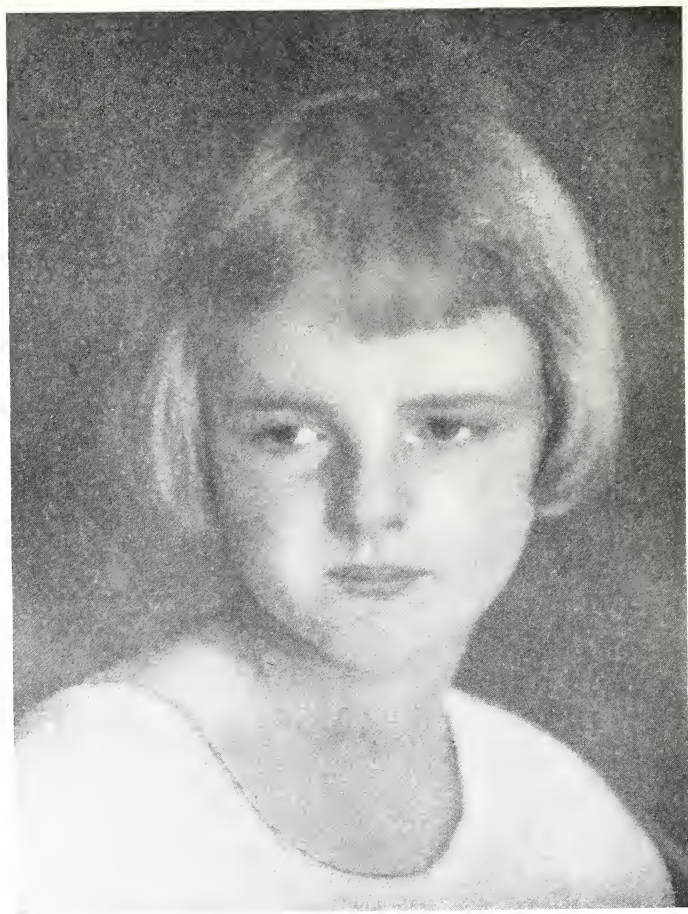
Manufacturers, as well as owners of studios, have also much to suffer from the ever-increasing wages of the employees. It is true that, before the war, wages for the middle and lower class of workers have been extremely low, and it is natural that now where more democratic, if not

socialistic, principles have become the rule, and also the cost of living is very high, wages must rise. But this has been done with no consideration for justice and reason. The lower the kind of work, the higher the pay is, throughout every industry and trade, always relatively and often even absolutely. An unskilled laborer receives as much as a middle mental worker, such as a teacher, registrar, clerk, bank-official; whereas a skilled worker in a factory receives the same or more than a university professor, judge, high state or municipal official. In addition to that regrettable fact, many thousands of skilled hands have been killed in the war, and helpers from other industries, even women, had to take their place, the consequence being a diminished output and diminished quality of the products. There is virtually no profession which does not demand the concerned parties to set up a schedule which the employers are forced to accept, if they wish to avoid a strike. In the photographic shops, as well as in the studios, the ghost of strikes has been virtually absent, but as one industry depends upon another, it is enough that the miners, glass-makers or railway-workers are out on strike for a considerable length of time, and thus also the photographic industry will doubtless come to a standstill. As much less is produced than formerly, while the demand is not lessened, a lively business is everywhere noticeable in second-hand cameras and accessories. The trade-papers and daily newspapers are filled with advertisements of that kind, but also with announcements of stolen cameras and warnings not to buy them.



PIKE'S PEAK

KENNETH HARTLEY



Courtesy of Pictorial Photography in America 1920

PORTRAIT OF A CHILD
DORIS U. JAEGER



EDITORIAL



That Heavenward Gaze

NOT long ago, a member of a local camera club submitted to the Editor, for criticism, an obvious attempt to imitate the well-known picture by Guido Reni, "The Repentant Magdalen." Its shortcomings were numerous, and included the result of a too low position of the camera. It is generally conceded that in portraiture a safe rule is to place the camera so that the lens is on a level with the nose of the sitter. There are cases, however, when it may be desirable to have the camera raised so that a downward perspective of the features may be obtained, which will have the effect to contract an abnormally long chin, for example, or to permit a view of the remains of a once opulent growth of hair. Captivated by the sad, heavenward gaze of the Magdalen—as pictured by Titian, Dolci and Guido—and eager to follow the pose of the painter, the inexperienced photographer arranges his model in accordance with the picture of the beautiful penitent, but afterwards discovers that the result is strikingly unsuccessful. The critic invites attention to the bad drawing of the features caused by the abrupt perspective—the distorted chin, the obtrusive nostrils, the contracted forehead and the distended muscles of the neck. The remedy is not so simple as it may appear. First of all, it should be remembered that not every face, however beautiful, lends itself to so trying an effect. A model having a well-shaped head, also beautiful and regular features, is indispensable. The kind and method of illumination will be another matter of grave concern, for it may be the making or the ruin of the picture. That the use of a short-focus lens is not to be thought of, must also be apparent to him who appreciates the importance of correct drawing—an essential which should form part of every portraitist's equipment. Now, with a good reproduction of Rotari's "Repentant Magdalen"—unless he prefers Titian's—before him, as a guide, the aspiring worker may proceed to arrange his model, avoiding excessive foreshortening, opaque shadows and a strained expression. The result should be gratifying in proportion to his choice of model, skill in the use of technical means and ability to interpret the theme. Similar poses, but with eyes directed downward, also lend themselves to genre-photography.

Choosing the Best Picture

THE observations by Winn W. Davidson on the choice of portrait-photographs—as to whether the photographer or the sitter is the better judge, are exceedingly interesting. Our opinion has always been that, as a rule, the photographer knows more about the artistic character of the portrait he has produced, and that the friends of the sitter are the better qualified to judge it as a likeness. The photographer, unless he has an unusually developed faculty of observation, forms an opinion that is based on a brief and superficial acquaintance of his sitter; whereas the relatives or friends, who see the sitter much more frequently than does the photographer, are familiar with the characteristic expression, attitudes and peculiarities of the sitter and should be in a better position to say whether or not the photographs are correct in these respects. The photographer should try to forget, if possible, the photographic atmosphere or feeling of the studio, and by well-known methods create in his sitter a frame of mind that is conducive to a natural expression of contentment, animation or repose that he feels must be right. The master-photographer will impart to the financier, the merchant, the lawyer, the actor or the clergyman a typical attitude or expression, although it has happened that he failed entirely to portray the marked individuality that belonged to such a sitter. All financiers, all merchants, all clergymen do not possess necessarily the same personal characteristics. Each, in his own class, has a distinct individuality. If the sitter have a forceful personality, it is very apt to assert itself, and the photographer must possess extraordinary powers, indeed, if he can subordinate it to his will and stamp the portrait with his own personality. But why should he?



As every color-photographer knows, the Great War has interfered seriously with the importation of Autochrome plates. Happily, the American agent is again receiving shipments of this welcome commodity and, with the advent of spring, the devotees of color-photography will be abroad. Devices to determine correct exposures will also be available.



ADVANCED COMPETITION

Closing the last day of every month
Address all prints to PHOTO-ERA, Advanced Competition
367 Boylston Street, Boston, U. S. A.



Prizes

First Prize: Value \$10.00.

Second Prize: Value \$5.00.

Third Prize: Value \$2.50.

Honorable Mention: Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

Prizes may be chosen by the winner, and will be awarded in photographic materials sold by any dealer or manufacturer who advertises in PHOTO-ERA, or in books. If preferred, the winner of a first prize may have a solid silver cup, of artistic design, suitably engraved.



Rules

1. This competition is free and open to photographers of ability and in good standing—amateur or professional.

2. *No more than two subjects may be entered, but they must represent, throughout, the personal, unaided work of competitors. Remember that subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era awards are announced.* Prints on rough or linen-finish surface are not suitable for reproduction, and should be accompanied by smooth prints on P. O. P., or developing-paper having the same gradations and detail. All prints should be mounted on stiff boards.

3. *Unsuccessful prints will be returned only when return-postage at the rate of one cent for each two ounces or fraction is sent with the data.*

4. *Each print entered must bear the maker's name and address, the title of the picture and name and month of competition, and should be accompanied by a letter, SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks will be sent at request. Be sure to state on the back of every print exactly for what competition it is intended.*

5. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. However, this does not prevent the photographer from disposing of other prints from such negatives after he shall have received official recognition.

6. Competitors are requested not to send prints whose mounts exceed about 11 x 14 inches, unless they are packed with double thicknesses of stiff corrugated board, not the flexible kind—or with thin wood-veneer. Large packages may be sent by express.

7. Competitors who have won three first prizes within a twelve-month, become ineligible for two years thereafter. The too frequent capture of the first prize by one and the same competitor tends to discourage other participants and to make the competitions appear one-sided and monotonous.

Awards—Twilight-Pictures

Competition Closed January 31, 1920

First Prize: Guy E. Osborne.

Second Prize: Alexander Murray.

Third Prize: George S. Nalle.

Honorable Mention: Paul E. Carden; John Dove; G. W. French; Willard H. Harting; Charles A. Hughes; Taizo Kato; F. W. Kent; Edward and Emil Kopp; Burr K. Osborn; Dr. J. B. Pardoe; Henry A. Pratt; F. H. Rodgers; J. Herbert Saunders; James Thomson; Alfred S. Upton; The Walters; Paul Wierum; A. S. Workman.

Subjects for Competition—1920

"Twilight-Pictures." Closed January 31.

"Still-Life." Closed February 28.

"Nature-Studies." Closes March 31.

"Rainy-Day Pictures." Closes April 30.

"Miscellaneous." Closes May 31.

"Speed-Pictures." Closes June 30.

"Rural Scenes." Closes July 31.

"Shore-Scenes." Closes August 31.

"Outdoor-Genres." Closes September 30.

"Architectural Subjects." Closes October 31.

"Domestic Pets." Closes November 30.

"Indoor-Genres." Closes December 31.



Photo-Era Prize-Cup

IN deference to the wishes of prize-winners, the Publisher will give them the choice of photographic supplies to the full amount of the First Prize (\$10.00), or a solid silver cup, of artistic and original design, suitably inscribed, as shown in the accompanying illustration.

Competitors Must Mind the Rules

COMPETITORS, in the Advanced Workers' and Beginners' Competitions, continue to ignore some of the rules, one of which is that the name and address of sender, also name, month and kind of competition must be written plainly on the back of each print. Otherwise, how is the jury to know? Besides, the Editors are too busy with other matters to stop to write to the careless competitor for missing information.

This is often the reason why careless entrants wonder what has become of their prints. Let them be more careful in the future. We will do our part if they will do theirs.



CHARM OF TWILIGHT

GUY E. OSBORNE

FIRST PRIZE — TWILIGHT-PICTURES

Prevention of Blisters

PRESENT-DAY practice is more favorable towards preventive than to remedial measures, says *Studio-Light*, and the prevention of any trouble is safer, more satisfactory and in the end much cheaper than the application of a remedy after the trouble has occurred.

It is quite true that in many uses of chemicals it is difficult to anticipate trouble, but in photography there are such simple rules to follow and so much practical information at hand that there is little excuse for trouble if simple preventive measures are used.

Blisters may be produced on any gelatine-paper if the gelatine is abused, and when you think of the treatment the gelatine receives you can readily see that it is under a constant strain from the time it goes into the developer until it comes out of the final wash-water.

Immediately a print is placed in the developer the gelatine begins to swell as it fills with water, and this swelling is increased by the alkali in the solution and by heat. The developer should not be too hot, and although it must contain alkali, there should not be too much.

These precautions should be observed, not because prints are likely to blister in the developer but because such precautions will help to prevent blisters further along.

If prints do contain an excessive amount of alkali and are carried from a warm developer into a strongly acid short-stop solution or fixing-bath, there is likely to be trouble at once. The action of the acid on the alkali in the gelatine forms a gas, and immediately there are thousands of miniature volcanic eruptions on the surface of the print.

Normally, the pores of the gelatine are open, the gas blows off and no harm is done. But if an excess of alkali and warm developer has softened the gelatine, the pores or small canals running through it have been made smaller by the swelling mass—the vents have been closed and a blister forms.

Rinsing after developing removes a considerable amount of the alkali in the gelatine, reduces the amount of gas formed and not only helps to prevent blisters but prevents the fixing-bath from becoming alkaline.

The blisters we have mentioned are not air-bells but gas-bells. Correctly speaking an air-bell is caused by dissolved air in the water, and this condition is encountered when the water used has been under high pressure.

Heat such water and you will see the air expelled and the bubbles form on the side of the vessel. Used in a developer, the aerated water penetrates the gelatine and if the solution becomes warmer the air is either expelled or the soft gelatine is blown up into an air-bell. The only safe way to use such water is to draw it in a barrel and allow it to stand over night before using. This allows the air to escape.

So far as we have gone the preventive measures are simple; but there is one thing left which is probably the most frequent cause of blisters—worn-out fixing-baths. Use fresh fixing-baths, make them properly from good chemicals and don't overwork them. It must be remembered that either acid or alkali will soften gelatine and it is the alum which has the hardening action. A worn-out acid fixing-bath will more likely soften gelatine than harden it, and the real strain on the gelatine comes when the print leaves the fixing-bath and goes into the wash-water.

This may seem strange but it is true. The gelatine



A DUSKY GLOAMING

ALEXANDER MURRAY

is filled with hypo in solution and this solution is of high concentration, and the wash-water, free of chemicals, is of low concentration. There is an equalizing force which causes the water to rush into the gelatine faster than the hypo can diffuse out, and as this force is greater than the resisting power of soft gelatine, if there is a weak spot in the gelatine caused by softening or swelling, that spot will develop a blister filled with water.

The means of prevention is a fresh fixing-bath which will harden the gelatine-emulsion uniformly. Don't attempt to renew a fixing-bath. It can't be done practically. A bath that is ready to be discarded is contaminated by developing chemicals and some of its own properties have ceased to function. You can't build it up. Use a fresh bath.

There is one other general precaution to be observed. Keep the temperature of solutions as nearly uniform as possible. If the developer is 70° F. don't have the hypo 50° F. and the water 80° F. A sudden change from warm to cold, or cold to warm solutions will often produce blisters.

If prints are inclined to blister during toning, the remedy is to treat the prints with a 3% solution of formalin before toning. If prints have not been properly hardened during developing and fixing, blisters

may be caused by the hypo-alum bath being too hot, or if they are re-developed, by an acid bleaching-bath or an excessively strong sulphiding-bath.

The fact that most printers are never troubled with blistered prints leads one to believe that only ordinary care is necessary to prevent the trouble, and in this case it is certain that prevention is always the safest measure, as there is no really satisfactory cure. If a blistered print must be saved it may be immersed in equal parts of water and alcohol, then in a bath of alcohol.

The Benefits of Photo-Era Publicity

My dear Mr. French:—

I want to thank you for forwarding the letter addressed to me by the editor of *The Farm Journal*. I am just writing an article for him now on Nature-Study Photography. My article from PHOTO-ERA also brought me a request from *Country-Life* and I sold them five small prints for \$17. Also landed one print in *Popular Science* at 85. Whenever I have occasion to mention photographic magazines to my friends, I tell them that PHOTO-ERA is the one magazine!

Sincerely,

LEHMAN WENDELL.



SUNSET'S GLOW

GEORGE S. NALLE

THIRD PRIZE — TWILIGHT-PICTURES

Press- and Portrait-Photographers

THE question of a press-photographer poaching upon the preserves which the purely portrait-photographer has come to regard as his own was discussed a little while ago, and was freshly brought to our notice during the past week at a wedding function. On the arrival of the bride at her mother's house after the ceremony a portrait-photographer who had been asked to come and make some groups of the wedding-party attended for that purpose. He was three-quarters of an hour late in keeping the appointment, but nevertheless spent something like an hour in making about half a dozen exposures on groups of the bride and bridegroom and of these latter with others of the party. He had scarcely packed up his apparatus and taken his departure when a motor-cyclist arrived with excellent finished bromide prints of the bride and bridegroom and the bridesmaids, made as they were leaving the church. A press agency's photographer had asked these members of the party to halt for an instant on their way to their carriages and had made several photographs, which were very good of their kind, and, at any rate, were thought to be excellent by members of the party, who evidently, though perhaps unconsciously, found some added merit in them in the fact of their very rapid production. In large towns competition of this kind is bound to go on, and it is for the portrait-photographer to consider how he shall deal with it. Plainly it is within his powers to offer the same kind of service as the press agency, which, as a rule, will score over the carefully posed group in the more pleasing expression of the subjects, even though the photographs may be inferior technically. On the other hand, such photographs as can be made while the wedding-party is dispersing from the church are usually not all which are required. Convention in most cases demands a group in which the parents and other friends of bride and bridegroom are included

with them and are arranged with regard to the family connections. This is one way by which the business may be prevented from passing into the hands of the press-photographer, but obviously if the latter's competition is to be met it must be met on his own ground.

The British Journal.

An Enlarging-Point

USERS of enlarging-lanterns with large condensers often fail to see the disadvantage under which they labor when using small plates, according to *The British Journal*. If we compare two lanterns, with equally strong illuminants, one having a condensor capable of covering a $6\frac{1}{2} \times 8\frac{1}{2}$ and the other covering only a quarter-plate, the focal lengths of the condensers being in the same proportion to their diameter, we find that in the smaller apparatus only a quarter of the exposure necessary with the larger one need be given to obtain the same result. It is, therefore, an excellent plan to have a smaller condensor fitted so as to be interchangeable with the large one when small negatives of considerable density have to be dealt with. Moreover, more range can be obtained for centering the light in the case of extreme enlargement or reduction. Another plan is so to arrange the negative-carrier that it can be brought forward into the convergent cone of rays so that a greater portion of this is utilized. This, unfortunately, necessitates a modification of construction which would be difficult with most existing lanterns, but which could easily be made by anyone building his own enlarger. Another desideratum is a fine adjustment for focusing, which can be operated when the lantern is several feet from the easel. In some of the early cantilevers there was a screw-adjustment in the middle of the front board, which could easily have been fitted with a long detachable key.



SUBJECT FOR NEXT COMPETITION ADVANCED WORKERS



SPRING-FLOODS

KENNETH D. SMITH

Advanced Competition—Miscellaneous Closes May 31, 1920

IN one sense, the annual Miscellaneous Competition may be considered to be a sort of consolation competition. By that I mean that this one offers workers the opportunity to submit really meritorious pictures that were not suited to previous (special) competitions. It is a sort of pictorial safety-valve for those who—for one reason or another—did not win a prize or an Honorable Mention during the year. If for any reason the subjects listed in PHOTO-ERA for competition failed to please him or if he was unable to meet the conditions imposed, the present competition gives the camerist *carte blanche*. There is no restriction of any kind, with regard to subject. Needless to say, interest of subject—whatever it may be—originality of subject, composition and technical excellence will weigh heavily with the jury. In short, because the camerist is at liberty to select the subject, it does not follow that he is free to ignore artistic judgment and technique.

The intelligent and well-equipped camerist need not go far to obtain real pictures of permanent value to himself and practical interest to others. Although landscapes are always of artistic value and interest, it

should not be inferred that home-portrait, outdoor- and indoor-genre, still-life, marine, camp, architectural, nature, speed and other pictures are unwelcome. However, "record" photographs are not desired in this competition. Try to decide whether or not the photograph you intend to send is of more than personal or local interest. This particular point is one for every camerist to remember in all his work for public exhibition at camera-clubs or in the press. Let him bear in mind that there is a great world beyond his horizon that cares nothing for him unless he touches a sympathetic chord—something in common with what we can all comprehend and enjoy.

The example, "Spring-Floods," by Kenneth D. Smith, is a picture well worth careful study. The originality of treatment, tone-values and portrayal of tremendous force make this picture a very unusual one. No doubt, many of our friends and readers have considered the attractiveness of a similar subject, but have failed to stand by their convictions and make a picture. The falls, so well portrayed by Kenneth D. Smith, were there for all to see and to photograph. Probably, many pictures have been made of this subject from other points of view; but it remained for our friend to see what others failed to see. The same statement may be applied to hundreds of similar cases.

I know of one photographer, in New York, who made virtually all of his pictures in Central Park. So cleverly did he select his subjects and point of view that many admirers of his work assumed that he must have traveled many miles into the country in search of his material.

The Miscellaneous Competition offers an exceptional opportunity to the worker who is waiting for the psychological moment to enter the ranks of the "arrived" pictorial and technical photographers. There are many readers of PHOTO-ERA who have profited by our efforts to make photography—artistically and technically—appeal to the man or woman who desires a mode of expression that meets, in great measure, the yearning for the highest and best in art and nature. We admit that we do aim high. Sometimes, we are reminded to "come back to earth"; nevertheless, we have noticed that many beginners have become first-prize winners in these competitions and that they have given our editorial efforts full credit for their own steady progress and final success. Now is the psychological moment for ambitious beginners who have won their spurs in the Beginners' Competitions to enter the larger field offered by the present competition.

Whatever subject you workers select, do not forget that the things that are truly great are invariably simple. One flower-study beautifully composed is worth a dozen flowers grouped in awkward fashion. Likewise, one landscape that conveys one distinct impression to the beholder is worth many that may contain three separate compositions absolutely unrelated. It is very much like trying to see how many persons you can include on a plate or film—invariably some one's head or foot is omitted and the result is neither a group nor a portrait. Strange as it may seem, the simpler the composition, the more difficult it is to perpetuate. Those who may doubt this assertion will do well to try to photograph one flower, apple, vase, pair of gloves, tree, person or animal and make such a picture a delight to the eye.

Human nature is ever an interesting study. Often, it strives to attain freedom of action and thought, only to be nonplussed by the very freedom it has sought. As applied to these competitions contestants sometimes write that for us to specify what the competitions shall be is a mistake, and that it has a tendency to nip photographic talent in the bud. Although it may be true in certain cases, we are still unconvinced that our statement in advance of subjects for competition is not the best method to pursue, after all. This Miscellaneous Competition is an excellent opportunity for those who may have felt hampered by our restriction of subjects. Needless to say, we are endeavoring to have these competitions serve our readers' interests to the very best advantage. If, inadvertently, we have suppressed the pictorial ambition of a budding genius by our usual method of classification, the present competition will offer him a much-coveted opportunity.

The matter of the best presentation is one that demands your best critical judgment as well as your best executive ability. A print may be faultless, technically, and yet fail to make an appeal to the emotions of the beholder. On the other hand, a print which in reality is faulty on the technical side, may be filled with poetry and mystery—gaining and holding the interest which the merely literal could never arouse for a moment. Above all, remember that your picture represents *you*, and that it will make its appeal in proportion to the time, thought and skill that you put into the making of it. In literary work the student is advised to select subjects that interest him and of which

he has direct knowledge. Unless he adheres to this excellent advice he is very apt to write an article or story that fails to interest the reader because of its lack of personality and authority. Virtually the same advice applies to you ambitious workers. If a beautiful landscape appeals to you and you portray it truthfully, the picture will arouse in the beholder the same delight that you experienced when you first beheld the subject.

Technical knowledge of composition is invaluable as a means to express that which is beautiful, true and spiritual, but remember that of itself the technical is cold and lifeless. True art comes first from the heart and then from the mind. Your pictures may be perfect in workmanship; but if they fail to inspire, please or otherwise move the beholder, you have not succeeded in true artistic photography. Emphasis is placed purposely on this point, because of the many who fail to realize its truth. Conversely, it does not follow that because you are not a professional photographer, you are incapable to produce winning pictures. Look to the inspiration of your effort. If it be strong, fine, true, beautiful and pure, you cannot fail. Such trivial technical mistakes as you may make are lost sight of in the appreciation of the appeal that you have tried to make with the knowledge and equipment at your disposal.

Indeed, we hope that all the pent-up pictorial emotions of many of our readers will find an outlet in a true and beautiful expression of the photographer's love of nature, humanity and spirituality. This competition represents the freedom of thought and action that some of our readers have hoped to obtain. It will be interesting to study carefully their pictorial use of this greatly desired freedom. In photography, as in other lines of endeavor, we turn instinctively to those subjects that we love most whenever we have the opportunity to do so. Unconsciously, we reveal a bit of our true character in so doing. Photographically, and otherwise, this is what we hope will make the present competition particularly desirable. The expression of individuality is one of the chief attractions of photography, and those workers who are sure of themselves and of their equipment should be able to enter this competition with assurance and pleasure. Let them remember that self-expression is always interesting and educational.

No doubt, many of our readers have enjoyed Kipling. One of his stories that has always impressed me is "The Ship That Found Herself." In it he describes how a new vessel made her first voyage and how each bolt, rivet, stanchion, deck-beam and spar discovered its special function and learned to work harmoniously to make the great ship staunch and speedy. The individual cannot hope to be a master of every branch of photography. He may become a specialist in portraiture and eventually attain fame; but he cannot be a master of portrait, marine, landscape and nature photography—that is, not as a rule. Now, if he sticks to his portraiture, another to his marines, and still another to landscapes, each will function efficiently in his special sphere and all together they will promote the growth and success of photography. By finding himself, the camerist will eliminate the deadwood of purposeless experimenting and will be enabled to focus his heart and mind on the attainment of the highest and best in the special field he *knows* to be his own. The work that a man or woman *loves* to do is very apt to be the work that he or she can do best. Let us see what branch of photography each of our contestants considers his special field of photographic activity.

A. H. B.



BEGINNERS' COMPETITION



Closing the last day of every month
Address all prints to PHOTO-ERA, Beginners' Competition
367 Boylston Street, Boston, Mass., U. S. A.

Prizes

First Prize: Value, \$2.50.
Second Prize: Value, \$1.50.

Honorable Mention: Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.



Subject for each contest is "*Miscellaneous*"; but original themes are preferred.

Prizes, chosen by the winner, will be awarded in photographic materials, sold by any dealer or manufacturer who advertises in PHOTO-ERA, or in books.

Rules

1. This competition is open only to beginners of not more than *two* years' practical camera-activity, and whose work submitted here, is *without any practical help from friend or professional expert*. A signed statement to this effect should accompany the data.

2. Workers are eligible so long as they have not won a first prize in this competition. Winners of the first prize automatically drop out permanently, but may enter prints in the Advanced Class at any time.

3. Prints eligible are contact-prints from $2\frac{1}{4} \times 3\frac{1}{4}$ to and including $3\frac{1}{4} \times 5\frac{1}{2}$ inches, and enlargements up to and including 8 x 10 inches.

4. Prints representing *no more than two different subjects*, for any one competition, and printed in any medium except blue-print, may be entered. They should be simply and tastefully mounted. ***Subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era awards are announced.*** Prints on rough or linen-finish surface paper are not suitable for reproduction, and should be accompanied by smooth prints on P.O.P., or developing-paper having the same gradations and detail.

5. *Unsuccessful prints will be returned only when return-postage at the rate of one cent for each two ounces or fraction is sent with the data. Criticism on request.*

6. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. However, he may dispose of other prints from such negatives after he shall have received official recognition.

7. *Each print entered must bear the maker's name, address, instructions, the title of the picture and the name and month of the competition, and should be accompanied by a letter, SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type, and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks will be sent upon request. Be sure to state on the back of every print for what contest it is intended.*

8. Competitors are requested not to send prints whose mounts exceed about 11 x 14 inches, unless they are packed with *double thicknesses of stiff corrugated board—not the flexible kind, or with thin wood-tissue*. Large packages may be sent by express.

Awards—Beginners' Competition

Closed January 31, 1920

First Prize: Edwin A. Jenkins.

Second Prize: Dr. H. Pieter.

Honorable Mention: H. B. Kiefer; G. A. Smith.

The Beginner and Nature

Did you ever stop to think what would become of photography if we could not turn to nature for subject-material? What would the pictorialists do for marines, landscapes, cloud-effects and woodlands? What would the nature-photographer do for subjects? What would the beginner do for his vacation-snapshots at the seashore, in the mountains or by the banks of some beautiful river? To my way of thinking, in popular parlance, photography would be pretty well "shot to pieces" without nature to turn to for pictorial inspiration. For this very reason, the beginner should learn early in his photographic career to study nature and to love the great out-of-doors.

It does not follow that because I urge the beginner to study nature that he must go far afield. On the contrary, some of the most satisfactory subjects may be found close at hand—even in the camerist's own garden or in a nearby park. The first step is to cultivate the ability to observe accurately. It is not enough to say that one saw a bobolink. One should be able to tell its size approximately, describe its white and black markings and know its rollicking song. The same statement should apply to any animal, bird, insect or reptile that one chances to meet. Then there are the flowers and trees, too, that require accurate identification. Moreover, cloud-formations and a general knowledge of meteorological conditions will prove to be of immense value. No doubt, the reader is asking what all this has to do with photography. Let me assure him that it has much to do with it. By cultivating an accurate knowledge of nature, the photographer attunes his heart and mind to the grand symphonies of the great outdoors and thus is enabled to portray pictorially the beauties of the sea, mountain and forest. Does anyone suppose for one moment that Alexander Daves Du Bois could have written and illustrated his poem, "To a Lone Fir"—in January, 1920, PHOTO-ERA—if he had not been attuned to the grandeur of the scene before him and to the dramatic appeal of the lone giant fir on that fire-swept, desolate mountain-side?

My plea for accuracy in making observations of nature is based on the need to have pictorial representations of nature true to the life. Also, to name a tree, flower or animal correctly often adds to its appeal. For example, if Mr. Du Bois in his poem had mentioned merely a large tree instead of the *fir*, much of the literary and dramatic appeal would have been lacking because the student of nature, knowing the habitat of the fir-tree, could appreciate the desolate character of the surroundings of the fir in the poem. Another incongruity would be to portray a hot-house rose in a vase and label the picture "From the Heart of Nature." Conversely, to make a photograph of a Lady's Slipper on a library-table and call it, "The



STUDY

EDWIN A. JENKINS

FIRST PRIZE—BEGINNERS' COMPETITION

Florist's Favorite" would be an insult to any observer who knows the secluded character of the orchid's habitat—deep in the woods. The photographer who understood and loved nature would be incapable of such a blunder. Even if his mind said yes, his heart would say no.

It should be evident to the beginner that a sound rudimentary knowledge of the ways of animals, birds, trees and flowers is of much practical photographic value. The ability to observe intelligently and accurately will enable the camerist to plan and to execute his outdoor photographic work to advantage. It matters little whether the subject is a landscape, mountain-peak or placid lake. From his store of nature-lore, the photographer will be able to portray with his camera that which he *knows* to be true to the beauty and grandeur before him. Some one has said that nature is always beautiful. By this is meant that, if the camerist comes upon a group of flowers at the roadside, he will find the flowers so arranged with regard to color and composition that they will blend harmoniously with their immediate surroundings. This is an open question. However, the fact remains that fidelity to nature as he finds it, *not* as he would wish it to be, is the beginner's surest way to success.

The reader may wish to know how the ability to describe a meadowlark will help him to make a good picture. Let me explain. To be able to describe a meadowlark from actual observation, a person must go to the meadow-lands. If he is even ordinarily interested, he cannot fail to see and hear many things of which he has meager knowledge. The fact that he does not know, is very apt to arouse his curiosity. Once that his curiosity is aroused, he will bend every energy to satisfy it and, in so doing, he will absorb unconsciously a large amount of information. The result is that he grows to love the quiet meadow-lands, to note the play of light and shade across the waving grasses and to wait for suitable cloud-formations to heighten the pictorial effect. Incidentally, he has seen the

meadowlark at rest and on the wing and knows its beautiful song by heart. The whole experience has aroused the person's finer and more spiritual self. He has become attuned to the symphony of the free winds of Heaven who acknowledge no control save that of the Master-Mind.

Perhaps, the reader is inclined to think that I am striving for an effect. I am; but for the benefit of the beginner—not of myself. If I can arouse every beginner to realize what it will mean to him to know and to love nature, I have achieved the effect I desired. My plea is neither new nor original. The basis of all true art is the human heart. If it pulses in harmony with the beautiful things in life and in nature, its possessor is enabled to mold by pen, chisel, brush or camera the hearts and minds of those less fortunate than he. When I stop for a moment to think of the infinite pictorial possibilities which lie in nature, I wonder that any normal man or woman can remain unmoved by the appeal. However, there are those who need a kindly hint sometimes to avail themselves of opportunities right at hand.

In a few weeks, nature will become more and more attractive until at the height of the summer there will be thousands of beginners who will be out with their cameras trying to portray what they believe to be beautiful. Then, it will become apparent who among those thousands has learned to know and to love nature. In one case, there will be reflected the heart of the maker and in another the coldness of one who "has eyes but sees not, and ears but hears not" the still, small voice of the great outdoors. The beginner should begin now to prepare himself to know nature and, in so doing, he will find that he has become a better, more sympathetic and truer man. It may not be apparent to the layman; but to the lover of nature and photography it is self-evident that to make beautiful pictures the photographer must first have the love of beauty in his heart.

A. H. B.



LA PANNE

DR. H. PIETER

SECOND PRIZE—BEGINNERS' COMPETITION

Emulsion-Making

RENEWED interest is being shown in the making of emulsions. Although the available data is rather meager, *The Amateur Photographer* points out editorially the existing possibilities with regard to emulsion-making.

One effect of the high prices of sensitive materials has been to suggest to some amateurs that they should make their own plates. There are probably not more than a score of amateur photographers now living who have made and coated emulsion, and it is quite safe to say that none of these have any notion that by doing so to-day they could effect an economy; but among the newcomers to the ranks it is possible that there may be some eager to try their hands at it. There are difficulties enough in the way. Working-instructions in plate-making have not been published for about a quarter of a century; but a copy of Abney's "Photography with Emulsions," if it can be picked up second-hand, will be found to contain such details as were known before plate-making became an industry. A suitable gelatine for the purpose will be hard to obtain in small quantities, we expect; but the other materials are readily accessible. The amateur with a roomy darkroom, with facilities to dry the plates when made, with some laboratory-practice and with an aptitude for the work, might find the manufacture of a few dozen plates a very interesting and certainly an instructive operation. High speed he will not be able to obtain without a good deal of experiment, and good luck; but a landscape-plate is not beyond the capacity of such a worker as we have described. As a lesson in cleanliness and accuracy of manipulation, plate-making cannot be surpassed, and it is certain also to give whoever tries it a greater admiration than ever for the wonderful perfection which has been attained in the product of our standard makers. But as an economy

—well, perhaps someone will do it and let us have his balance-sheet. We can only say that we shall be very pleased to publish what—if complete—would be an exceptionally interesting document.

Foggy Days

LONDON is famous for its foggy weather, and the advice given by *The British Journal* may be found equally applicable to cities in other parts of the world similarly afflicted. The weather during the past few weeks has been quite seasonable, or, in Air-Force parlance, visibility is low. To photographers this means that the light is poor and that flat negatives are the order of the day. However, there are few studios now that are not provided with electric light, so that exposures are always possible; but there is so far no means to clear the atmosphere, despite the promises of experts to precipitate the suspended carbon by electric discharges. There are fortunately some ways to mitigate the trouble caused by fog in the studio, which photographers should not overlook. One is the employment of a short-focus lens as can be used without causing noticeably bad drawing, so that as little atmosphere as possible intervenes between lens and sitter. Another is to screen off all light which is not actually falling upon the sitter. If two exposures be made—the same-sized image being obtained in each case, one with a sixteen-inch lens and the other with a ten-inch—it will be found that the latter is appreciably more brilliant, and a further improvement can be made by building a sort of tunnel with backgrounds or screens so that the camera-end of the studio is in shadow. Full development should be given so as to secure as much contrast as possible, and although the negatives may look rather muddy, they will yield fairly bright prints.



THE CRUCIBLE

A MONTHLY DIGEST OF PHOTO-TECHNICAL FACTS

Edited by A. H. BEARDSLEY



A Call for Practical Articles

THE editor of this department believes that there are many readers of PHOTO-ERA who will be glad to co-operate with him to make *The Crucible* an eminently helpful department and to widen its scope. To this end, we will offer each month a three-month subscription to any reader who contributes the most practical and helpful article of not more than three hundred words. We are specially desirous to receive items that are new, technical and of scientific value. Contributions, other than the winning article, that possess sufficient merit will be published with full credit to the author. It is not necessary that contributions be of special literary merit, as the editor will edit—when necessary—all material submitted to this department. Although items of technical interest are desired, we do not desire articles that involve highly scientific chemical and technical formulae or to discuss subjects in language that is incomprehensible to the average amateur or professional photographer. In short, it is the editor's aim to make this department *unusually* interesting and to avoid "dry-as-dust" articles that would interest only the trained chemist or physicist. The hearty co-operation of every reader of PHOTO-ERA is asked in order that we may make this department of exceptional practical value and interest at the very outset.

Enlarging Films by Expansion

APPROPOS of the interesting article, "A Photographic Gamble" by L. B. Flint in January, 1920, PHOTO-ERA, we call attention to the following letter from Godfrey Wilson in a recent issue of *The British Journal*. Mr. Wilson writes in answer to a correspondent who asks about the method of enlarging negative-films by stripping and expansion—a process that has never been popular because the photographer never knows the amount of enlargement he will get or the degree of reduction in density. "The process," Mr. Wilson goes on to say, "first advocated, I believe, in 1882 was boomed in 1891, in which year Cresco Eufima, a commercial preparation, was patented. You are, I think, right in saying that the marketed powder consisted of sodium fluoride and tartaric acid; but for home-manufacture hydrochloric acid is to be preferred. I made many experiments at the time, and found that a serviceable solution could be made by dissolving a dram of either sodium or potassium fluoride in a pint of water, and then adding a little—say 50 or 60 drops—of hydrochloric or sulphuric acid. On immersing the unvarnished negative—the newer the better—in the solution the film leaves the glass and becomes enlarged about $1\frac{1}{2}$ linear, after which it is washed and floated and dried upon a fixed and washed unexposed dry-plate of the required size.

About the time this method of enlarging was the craze, a French experimenter stated in the pages of the *Moniteur* that the following solution for film-enlargement could not be beaten:—Hydrofluoric acid, $\frac{1}{4}$ oz.; citric acid, 1 oz.; glycerine, $\frac{1}{4}$ oz.; glacial acetic acid, $\frac{1}{4}$ oz.; water to 8 ozs. All by weight. This formula, it will be noted, includes hydrofluoric acid, the ortho is

but very troublesome liquid for stripping films, which other experimenters have in one sense eliminated, the acid and the sodium in the rival formula combining and setting free the necessary fluorine, it being considered better and safer to get the latter indirectly than to use the actual product which needs an india-rubber bottle for storage because of its action upon glass.

The above solutions may be used for film-stripping when no enlargement is necessary; the enlargement does take place, but the film is taken back to its original size by soaking in a bath of methylated spirit. So far so good, but I have found the greatest difficulty in making the spirit-treated films adhere to a fixed-out and washed dry-plate, the task from beginning to end not being so simple as some of the text-books would have us believe it to be."

Niépce's Cardinal Plate

AMONG the historical evidences of the earliest period of experiment in what afterwards became photography is the metal-plate photo engraved by Nicéphore Niépce, which is preserved at the little museum at Chalon-sur-Saône, in which are collected many other relics of the French inventor. It is usually stated, says *The British Journal*, that the date of the making of this plate, which represents a portrait of Cardinal d'Ambroise, by Niépce, was 1824. We see, however, in the current issue of the *Bulletin* of the French Photographic Society that M. G. Potoniée, as the result of an analysis of early documents and correspondence relating to the work of Niépce, has come to the conclusion that the date of the plate should be two years later, namely, 1826. The earlier date appears to have been ascribed by a local collector of Niépce's specimens without sufficient evidence. M. Potoniée is able to show from the correspondence of Niépce with the Parisian engraver, Lemaître, by whom the plate was proofed, that it is a matter of almost absolute certainty to assign the year 1826 to it. The question may seem an exceedingly minor one, but inasmuch as proofs from the plate are preserved in the Chalon Museum, in the Musée des Arts et Métiers and by the French Photographic Society, all bearing the earlier and erroneous date, there seems good reason for drawing attention to an historical error which has survived too long.

Hypo and Hypoing

SPEAKING of hypo, have you noticed that the directions given for working with plates and films, gaslight and bromide papers invariably call for the use of an acid-fixing bath? And did you ever ask that compendium of wisdom, the clerk behind the photo-counter, to elucidate the why of the acid in the bath? If so, you learned that the acid and the alum harden the gelatine and stand behind the otherwise defenseless photographer and a host of painful disasters, such as ruined films, frilled plates and blistered enlargements.

And yet, if you are an amateur who combines a spirit of adventure with a limited photographic budget, you will get a thrill not entirely unpleasant by defying all advice and admonition and by leaving out the alum

and the acid and the sulphite when you compound your next fixing-bath. Simply dissolve one pound of hypo in two quarts of water, and label the bottle, "Just as good as acid-fixer that costs three times as much." And for almost all purposes you will find that it lives up to its title.

With some packages of P M C bromide paper I have gotten blisters when plain hypo was used, but other batches of the same paper gave no trouble. The blisters can be prevented easily, however, by giving each sheet two minutes' immersion in a formaldehyde bath—one part commercial formaldehyde to 100 parts water—at some time before the final washing. It seems to make no difference whether this comes before or after developing or after fixing. An alternative scheme is to use a bath of one teaspoonful of alum to 10 ounces of water between the fixing and washing. No other paper that I know requires this precaution.

In eight years' experience with it I have had virtually no other troubles traceable to lack of hardener in the plain fixing-bath. I work the hypo until it is nearly exhausted and then discard it. Its fixing ability is well indicated by the quickness with which it clears a negative. When using paper, I test the bath by dropping in a piece of film torn from a discarded roll. If this does not clear within five minutes I either throw out the hypo or use a fresh bath following the weak one. The advantage of the latter scheme is that it uses up the entire strength of the weak hypo and yet takes no chances with it. Furthermore, the prints get twice the usual exposure to the hypo-solution and are less apt to suffer from insufficient fixation due to stacking in the trays.

H. H. BLISS.

A Substitute for Photographic Albums

FINDING the cost of photograph albums to be rather high, I tried the following with excellent results. I obtained a cheap loose-leaf binder $8\frac{1}{2}'' \times 10\frac{1}{2}''$, a few sheets of black, brown and gray paper, cut them to 8×10 size and fitted them in the binder, thus obtaining an album for about one-third the cost of the regular article.

My method of mounting may be of interest. The photographs range in size from 3×4 to 5×7 , but I rarely mount more than one on a page and never more than two, as I have noticed that in the usual amateur's album, many a good picture is "killed" by overcrowding, by the color of the mount, or by placing pictures of different "keys" on the same page when the one detracts from the other. Excellent results are obtained by multiple mounting, and for this I have used covers from catalogs and brochures and even ordinary brown wrapping paper, the sole consideration being what would show the print to the best advantage.

I may add that the paper used for the pages was obtained from a printer and is known, I believe, as "cover-stock." It is obtainable in a great variety of shades and finishes and at a trifling cost.

When care is exercised in the mounting, the result is a series of pictures rather than the usual jumble of "snapshots."

D. C. ATKINS.

A Suggestion for Slow Snapshot-Exposures

MOST of us—although we are apt to brag about our steady nerves when using a small hand-camera—occasionally "wobble" and, perhaps, spoil a picture that we very much want. There does not seem any way out of it; but I have a plan which saves at least part of

the tremble of the camera and substitutes for it if any, a slight swinging motion. Just a plain stick to rest on—not against—the shoulder with the front end beveled off so that the camera being level will have the direct-finder on a level with the eye without bending the head down to it. And in addition the usual tripod-screw to attach it.

If I do not have this equipment with me, I substitute a cane or any stick I can pick up and rest it on my shoulder as described and hold the camera against the stick with the hand that holds the camera. In using the prepared stick with the tripod-screw I can either view the picture in the finder; or, if in too much of a hurry for that, I sight over the finder, the same as in sighting a gun.

WILLIAM H. BLACAR.

Gas-Leakage from Flexible Metallic Tubes

A PRACTICAL hint with regard to leaky gas-tubes is given in *The Amateur Photographer*. Photographers use a large quantity of flexible metallic tubing when enlarging or conducting other operations. Usually, the rubber-ends fixed on the pipes are very serviceable, and prevent any escape of gas. But sometimes, after a bit of service, these become slack, and the gas leaks considerably from the joints. Of course, the best thing in such a case is to get new rubber connecting pieces properly fitted on by the plumber.

But it may happen that the leakage is discovered when this cannot be done for the moment, and the worker has to devise some means of stopping the escape or else work under evil-smelling conditions. At a pinch, ordinary soap can be rubbed well around and moulded into position. Melted sealing-wax can also be dropped around the joint.

But the best material to use is ordinary orange-shellac varnish, which should be fairly thick in consistency. It is brushed around the joints and allowed to set. When set, it is not hard, like sealing-wax, but slightly flexible; and thus it makes a good serviceable joint, bending with the play of the tube and not cracking and allowing the gas to escape.

Radiographs Direct on Bromide Paper

THAT the use of bromide paper in connection with radiography is feasible, was pointed out in a recent issue of *The Amateur Photographer*. A large number of X-ray pictures are now made direct on bromide paper without any intervention of a plate. The possibilities of replacing plates by paper, of course, are limited; for paper is unsuited for the finest detail and gradation, which are to be appreciated only by transmitted light, and not by the reflected light which is used in examining a direct print. Nevertheless, as radiographers are finding out, bromide paper has its great advantage in economy and ease of manipulation when it comes to coarser subjects, such, for example, as undoubted fracture of bone. One radiographer who has been working on these lines says that the bromide paper of choice should be the most rapid positive paper that can be obtained—of the carbon or contrast type—and a surface about the same as that of a plate is to be preferred to an enamel-surface. An intensifying-screen should always be used, the tube should be softer than for plates, and the exposure for any special paper must be found by experiment. Metol-hydroquinone, the usual developer for radiographic plates, can be used for these prints also, with the addition of some extra bromide. The radiographer will do well to investigate the latest developments in his important specialty.



ANSWERS TO QUERIES



L. L. D.—The best book on bird-photography in our opinion, is "The Home-Life of Wild-Birds," by Francis Hobart Herrick, with 160 original illustrations by the author. Although Mr. Herrick's remarkable book was published fourteen years ago, it still remains without an equal, as regards the simplicity and efficiency of this method. Many books and articles on this subject have been printed since that time, but none approaches in simplicity and effectiveness, Mr. Herrick's method of photographing wild birds in their habitats, or in the open, close by. PHOTO-ERA has published extracts with specimen illustrations from Mr. Herrick's admirable book in April, 1919 and June, 1918. This wonderful book is unfortunately out of print; but PHOTO-ERA has one copy at the original publisher's price, namely \$3.

N. T. B.—The Goerz Dogmar F/4.5 lens will meet your requirements satisfactorily if your camera has sufficient bellows-extension. You will be able to utilize the three-focus advantage; namely, the complete lens, the front combination and the back combination. By writing to the C. P. Goerz American Optical Company, 317 East 34th Street, New York City, you will obtain complete data as to the exact focal lengths of the various combinations. Without reserve, we can state that the lens, for the purpose you intend to use it, will meet every test.

A. F. H.—Spots on postcards in the developer may be due to spots that are in the cards. If so, there is no remedy—the cards are useless. However, the spots look to us to be very much like those that are caused by undissolved particles in the developer. Before we condemn the postcards we should advise passing the developer through cotton placed in glass-funnel. This operation would strain out any undissolved particles. If spots continue to appear, there can be no doubt that they are caused by something in the cards and we should advise you to communicate with the manufacturers.

C. A. F.—Diaphragm-stops on Zeiss Protar lenses are often marked 34, 27, 17, 12 and so on, the numbers getting smaller as the size of the stop decreases. The method used with Messrs. Zeiss—until recently at any rate—was not to mark the F/numbers on the diaphragm at all; but to mark the iris with the number of millimeters in the diameter of the aperture. We think that this has happened in your case. If the marks are the millimeters in the diameter of the aperture, divide the focal length in millimeters—which you will find engraved on the cell of the lens—by such figures in order to obtain the F/-number of the different stops.

W. E. E.—The diaphragm-markings of the earlier Protar lenses offer some difficulty to photographers. From your statement that the diaphragm is marked up to 29 mm.—about $1\frac{1}{4}$ inches—we assume that the lens is one of the very earliest Protar lenses that were produced, although none the less excellent for that reason. All of the more modern lenses are marked with either U. S. or F diaphragm-values. Your front element series VII F 35 cm. is equivalent to our present $13\frac{3}{4}$ -inch Bausch & Lomb Protar series VII and the

rear element series VII F 29 cm. is equivalent to our $11\frac{3}{8}$ -inch series VII element. The combination gives you an equivalent focus of approximately 7 inches which as you assume in your letter corresponds to a VII A 5 x 7. This can be fitted in a Volute shutter No. 2. You could also add at any time a No. 2 series VII 5 x 7 so as to make a complete "C" set. You mention having also a No. 3 F/4 Wollensak Verito of diffused focus. This cannot be fitted in the No. 3 Volute shutter as the diaphragm-opening is too large for this shutter.

With regard to your inquiry concerning the placing of the front and rear elements we always advise that the elements be used behind the diaphragm when used alone as the lenses are corrected for this position. The only time that we would suggest using a single element in front of the diaphragm would be in the case of a camera having a bellows-extension of too short a range to accommodate the focal length of the lens. In this case one can take advantage of the fact that the optical center of the series VII Protar lies outside the positive curve of the series VII element and, therefore, a shorter bellows-extension can be used although retaining the advantage of size of image which would not be the case if you were using a lens in which the back focus and equivalent focus were nearly identical.

M. L. E.—With regard to the image almost disappearing from the negative, we are under the impression that the difficulty encountered is due possibly to the fact that the plate was not thoroughly washed after using the Eastman Intensifier. This contains a chemical which, in combination with the Velox Re-Developer, acts as a reducer. This explains the unfortunate circumstance that the image almost disappeared. We cannot understand why after intensification with the Eastman Intensifier, the image appeared as though it had been reduced, although you do not say that the print from the negative showed that reduction had taken place. If the fine detail has been lost as a result of the above treatment then we are afraid that nothing can be done to restore the detail. If the negative is too thin to make a good print, we would recommend making a duplicate positive and negative on a Seed 23 emulsion, developing fully so as to obtain the necessary contrast.

T. M. R.—A slight scratch on one of the glasses of your lens will not leave a corresponding mark on the negative. If you disbelieve this, cut a little piece of black paper, stick it on the lens and make a picture. We cannot imagine what is wrong; but if you obtain negatives with a "mark" on them you may be quite sure that that mark cannot originate in any corresponding mark on the lens. If there is a mark on the lens, then it is certainly a matter for the makers of the lens. However, unless it interferes seriously with the working we would not trouble about it.

W. J.—There is no danger in handling hydrofluoric acid, for in stripping negatives the acid-solution is used quite weak and need not be touched with the fingers. The acid requires to be bought in a gutta-percha bottle. Instead of the acid itself, you can use a mixture of sodium fluoride, hydrochloric and sulphuric acid.



OUR CONTRIBUTING CRITICS



YOUR CRITICISM IS INVITED

Whoever sends the best criticism (not over 150 words) before the twentieth of the current month, will receive from us a three-month subscription to PHOTO-ERA MAGAZINE.

The winning criticism, in our opinion, is the first one printed below.

This is a charming composition. The running water gives life and reality to the picture. If clouds were printed in, to avoid distraction by the bright patch of sky, the interest would concentrate upon the center of action. If the figure were on the opposite side, and the camera had been moved to correspond, several advantages would have been secured; the trees lining the road might have been a better background than the bald sky; more expression would have been shown in the figure; the operation inside the well would have been better lighted; the water would have been contrasted with the shadow of the spout. Perhaps, if the picture had been made much later, when country-people usually draw water, these same effects might have been achieved. Neither the well nor the graceful young man in most modern clothes are old, so the title, "At the Well," would have been better.

ARTHUR L. SEITER.

I THINK that all the prints I have seen of George W. French have been beyond my powers of criticism; but I think that I can suggest one or two improvements in this picture. In the first place, that big, blank space attracts the eye too much. A background of the trees necessitating a different viewpoint would have been better. Secondly, I do not see the need to obliterate the man's features against a dark background. If the top of the well had been raised as the sun was shining on the well, his face would have shown up much better. The action and position of the figure are very good. Although the exposure was sufficient for the shadows, it was too long for the water which has too solid and pulled-out an appearance. This could have been avoided by a shorter exposure and larger aperture of the lens. 1/20 or 1/25 second at U.S. 4 would have given enough depth.

F. H. RODGERS.

As in at least one other example of George W. French's work, the action in this picture is particularly good. There is also an artistic sketchiness of effect which is rather surprising at F/16. The use of a 14-inch lens gives a pleasing perspective to the geo-



THE PICTURE CRITICIZED THIS MONTH

metrical lines of the well-top, and so far as the main composition is concerned, the viewpoint is well chosen. The rectangular patch of white sky is a defect that apparently could not be avoided; and it is unfortunate that the man's head coincides with the horizon. The light-struck effect in the lower-left corner could be helped by allowing that part to print a little darker. Doubling the exposure would give more atmosphere to the background of non-actinic green and would probably show the subject's face to better advantage. A little more margin at the bottom and sides might be an improvement.

WINN W. DAVIDSON.

THERE are three centers of interest in "At the Old Well." The man's face, his hands and the water flowing from the spout. Good composition demands one center of interest—or at least one chief center. These three compete with each other. All three centers of interest are in the center of the picture space, which is the weakest position. A different point of view may have given a better sky-line—especially if the picture were composed horizontally instead of vertically. The outline of the two trees "shoots the vision" right out of the picture and there is no lead back to a chief center of interest. The shadows are a little hard and that cast by the man's form against the side of the well-casing should be eliminated or the man so placed that the shadow would not occur. The juxtaposition of the man's face and the back-

ground is unfortunate—it obliterates what detail there is in the face.

ERNEST J. WEBB.

THE bright sky destroys the balance of masses and holds the eye away from the subject. It might be rubbed down to print quite a dark tone corresponding to a deep-blue sky at mid-day. At the same time I would get rid of the distracting highlight created by the roadway. The face of the figure might be dodged to preserve detail now lost, the flowing water brightened by retouching, and the tone-range of the picture slightly increased to attain a better representation of sunlight. Had the picture been made at an earlier or later hour, I believe that a better representation of the action of the picture might not be clear to one unfamiliar with the internal construction of such a water-raising device.

EDWARDS H. SMITH.

IN "At the Old Well" the distance does not go back in a satisfactory manner and there is poor perspective. The pump in its position on left is well placed, but the man's body has such a "pull" to right that it makes the principal item badly centered. The blank sky with line of trees cutting through the hat is a bad feature. Cutting off $\frac{1}{2}$ -inch from left, $\frac{1}{2}$ -inch from top and $\frac{1}{4}$ -inch from lower margins "pulls" the picture together. Reducing the sky in the negative brings better perspective.

M. N. BREMON.



OUR ILLUSTRATIONS

WILFRED A. FRENCH



THE current front-cover is adorned by a foreground-study of striking scenic beauty—due to the artistic skill of a "Pictorial Photographer of America," David J. Sheahan, and the courtesy of Tennant & Ward, agent of the publishers of "Pictorial Photography in America, 1920," which work was reviewed in March PHOTO-ERA. In pictorial design—nay, in the form of the trees, the picture suggests a landscape by Claude Lorrain, although the intention to imitate that artist was far from the camerist's mind. The prevailing sentiment in Mr. Sheahan's stately composition, "Elysian Park Vista," is cheerfulness—a happy attribute, indeed. The picture is one of one hundred masterpieces that form the pictorial feature of "Pictorial Photography in America," already referred to, and which represents for the first time in book-form the executive ability of the American worker in the field of pictorial photography. I hope that I may be pardoned if I express again my admiration for the energy and taste of the gentlemen to whom is due the successful publication of this pictorial annual.

The sturdy figure that fills the space with dramatic action, telling the story of the storm in a manner at once impressive and convincing. It forms a worthy frontispiece. To the beholder who has visited the Sistine Chapel, this handsome male figure recalls visions of rare artistic enjoyment, yet serves to call forth the appreciation of a masterly achievement in thematic conception and pictorial composition. Like the rest of the series of the subjects that illustrate the Third Los Angeles Salon, as described by Arthur F. Kales, Francis W. Covell's "Storm," is described in the text.

"Vanity," page 170; 4 x 5 Graflex; 9-inch Wollensak Verito; stop, F/5.6; flash-light exposure; Ortho-plate; pyro; Wellington Bromide. The model was Miss Ernestine Myers, a vaudeville favorite and graduate of the Ruth St. Denis School. This picture was hung also in the Wanamaker Salon.

"Carnival-Dress"; page 171; artificial light; 8 x 10 Eastman view-camera; 14½-inch Wollensak Verito; stop, F/4; 4 seconds; Standard Polychrome; pyro; carbon.

"Night's Curtain"; page 172; October, 4.30 p.m.; 4 x 5 Graflex; 9-inch Portland lens; stop, F/6; Brakel & James ray-filter; 1/25 second; Standard Ortho-plate; M. Q. developer; carbon, double print.

As Kenneth Hartley makes his home in Colorado, in the shadow of her highest mountain, he has come to understand its aspects and moods. The view of Pike's Peak, page 193, is one of many with which the artist has favored PHOTO-ERA, and may be accepted by the reader as a typical portrait of this majestic mountain.

In Doris U. Jaeger's felicitous portrayal of a young girl, page 194, the beholder has another opportunity to admire the interpretive ability of a "Pictorial Photographer of America"—another member of the one hundred elect. The adolescent face is as charming in repose as in joyous animation, though it would seem to lend itself to an expression of serious meditation.

Advanced Workers' Competition

THE thematic novelty and atmospheric beauty of Guy E. Osborne's twilight-scene, page 197, won the jury's supreme favor. The feeling of approaching

evening has been interpreted with true poetic skill, and the placement of the group indicates appreciation of what is best in pictorial composition. Data: November, 4 p.m.; soft light, 8½-inch Turner-Reich lens; stop, F/6.8; 1/25 second; three solution pyro and soda in tray; an enlargement was made—the sky being printed from a Wratten Wainwright Panchromatic negative which was exposed just at sunset—and subsequently copied. Print on Buff, Iris Artura; Hydro-Elon.

Alexander Murray's panel, page 198, charms the eye by novelty of design and tonal quality. The picture gains by a diffused reflection, the general tendency being to duplicate in sharpness of definition the reflection of the object. Mr. Murray has shown admirable judgment in determining the proportions of his picture and in graduating his tones towards the extremities. Data: September 27, 1919; across Pleasure Bay from Castle Island at slack tide; about 6 p.m.; soft yellow light; 4 x 5 Premo; B & L, special lens, 6½-inch focus; at F/8; 1/25 second; Cramer Iso Medium; Amidol; enlarged on P.M.C. No. 8.

"Sunset's Glow," page 199, is in direct contrast to the preceding two pictures. It is brilliant, dramatic in character, and at once arrests the attention of the beholder. The pictorial arrangement is capital. The effect aimed at by Mr. Nalle would have been as pleasing, had the terrestrial objects appeared in a less intense black.

Although "Spring-Floods," by Kenneth D. Smith, page 200, has appeared in an earlier number of PHOTO-ERA, and is used on page 200 merely as an example of meritorious work, it gives genuine pleasure by its intense realism of the rushing waters, and the admirable tone-values. How superb is the contrast between the dark tones of the impetuously disappearing waters and the white, foaming masses of the impact below! And how tremendously effective and imposing would be a greatly enlarged print from the original negative! Data: Vermont; April; Premo No. 12, 2¼ x 3¼; 3½-inch Goerz Celor; stop, F/8; 1/25 second; Premo film-pack; tank with pyro; part of negative enlarged on Enlarging Cyko Plate.

Beginners' Competition

THE chief merit of the still-life entitled "Study," by Edwin A. Jenkins, page 203, is the expressed appreciation of balance in composition. The effort is praiseworthy; but the object employed to provide the balance is too conspicuous; indeed, it is too strongly emphasized. It were better, had the object been placed back several inches, thus less sharply defined. The interest of the group might have been heightened, too, had the source of illumination been lower, thus causing longer shadows. Data: January; gas-light; Filmpate Premo; 6¼-inch Bausch & Lomb Planatograph lens; stop, U.S. 4; three-minute exposure; Seed 30 plate; Carbon Velox.

In his picture entitled "La Panne," Dr. H. Pieter, a camera-enthusiast in San Domingo, West Indies, shows a small boy adjusting or mending a toy-automobile—a subject for an interesting genre. The arrangement is pleasing, in the main, but the principal objects in the picture are hampered by a busy back-

ground. The visible annoying obstacles scattered throughout the picture could easily have been removed before the exposure was made, or worked out in the negative. Of course, the boy's upper clothing is a marring feature, showing insufficient preparation. Now, local reduction on the negative is the sole remedy. Data: August afternoon; Hermagis Aplanastigmat; at F/6.8; 2-time ray-filter, Cramer Iso; 1/5 second; Azo Glossy contact-print.

Our Contributing Critics

"How easy!" will be the remark made by our contributing critics when they behold this month's picture to be offered upon the altar of sacrifice. It is hoped that the critics will treat the fair model with their usual gallantry. She couldn't help the jazzed appearance of the ensemble; nor could the armful of domestic pets. "Gentlemen, I thank you!" Data: In shade, 4 P.M.; 4 x 5 Revolving-Back Graflex; 9 $\frac{3}{4}$ -inch Bausch & Lomb Tessar; stop, F/4.5; 1/10 second; Preno film-pack; tank; pyro; enlarged to 8 x 10 on Royal Bromide; re-developed.

Periodic Interest in Photography

EDITOR PHOTO-ERA MAGAZINE:

Dear Sir:—

I have just been reading your editorial in the February number regarding prizes and earlier aspirants dropping out of the competitions. I have found in my own case that interest in camera-work, instrumental playing and other secondary occupations or hobbies comes in waves. While the camera, for instance, has the floor, I work over it harder and harder and the effort outdistances the results until it is thrown aside and not touched for six months or two years. By that time, the true values have been separated from the chaff, dust and silt, and work can be renewed on a clear field.

My business is engineering, and the difference between camera-composition and engineering-design is noticeable. Nobody would successfully build an electric motor without first laying out each part and fitting them together on a layout-sheet. Each step and part must be finished and fitted before the whole can be completed. If any part fails, the whole fails. Camera-work is the reverse. We make a picture; it may be a faithful transcript, but not a picture. Then we try to find out why it is not a picture, and the effort appears like climbing the side of a vertical wall.

Solution of such a difficulty usually consists in dividing the work into small steps, and mounting or solving each step or problem, as we go. A steel-bridge, for instance, may be placed in position by a large crane; but usually it is handled step by step with stagings, tackle, dummy-riders, etc.

There is another point touching on this work—measurement of results. I read, the other day, that during the gold-strikes many enthusiasts were fooled by finding "near-gold"; but they were always undeceived when it was placed beside the real metal. Estimate of photographs seems to be subject to the same condition. Many of us, no doubt, have visited every exhibit available in order to get good ideas of measurement; but I have found many difficulties in that way.

At a large city department-store, there was an exhibit of enlargements. There were several interesting prints; but to me the exhibit was a disappointment because the difference between it and the scenes represented seemed so great. At the Cleveland Museum of Art, last year, I looked at an exhibit there, enjoyed it in

a way, went into the next room and found a colorful exhibit by a California artist of the outdoors. I again came away without interest in the photographs. The Cleveland Photographers' exhibit offered the third effort. I enjoyed the work found there; but, in my mind, the pictures are fringed with looping curtains of special dark rooms, chair-and-scenery equipment for portrait-work and other stage-equipment.

I find more things of value in the PHOTO-ERA to help me along than in any of the exhibits I have visited. I think that the best pictures—such as the "Outposts," by Mr. Mortimer, in the February number—give a fine standard of comparison. Competition pictures, Mr. W. S. Davis' pictures, and articles on the different steps of photography (I hope to gather these articles together to form a book) and the department, "Our Contributing Critics," I find very interesting.

Just lately, I have been helping in the preparation of a descriptive catalog on cranes. I have seen good photographs made, the prints retouched, the halftones made, and the printer's copy from the press. One very good photograph was not retouched; but the final print was poorer than the print from the poorest retouched photograph. Knowledge of these changes shows me that the published copy of the picture may differ considerably from the picture itself. So it would not be entirely fair to compare your own effort in a prize-winning competition with the published print of the prize-winning picture.

The last wave of camera-enthusiasm roiled up the water and bucked me so hard against the rocks of dissatisfaction and unreality, that the next one is a long time in coming. An automobile has opened the out-of-doors to me, and its mechanical troubles have occupied my spare time lately; I am sure that no one would dispute the reality of results in connection with an automobile. However, I know that the camera-interest will come back and, when I saw your article, this morning, I found that I wanted to put down in black and white just where I stood. When the next wave of interest comes, I hope to get a Speed Graphic camera because of its combination of large groundglass for composing, direct view-finder, rapid lens and shutter combined with compactness. Enlargements I hope to make on a suitable paper. Retouching, shading or penciling would follow, and the result rephotographed on a large film. Contact-prints can then be made from the film. I hope that this will be one means to break up the work of making the picture into several parts, and making the tools suitable for their work without having a failure—unless everything works at its very best. I also have a feeling of considerable modesty in the pictures I expect to tackle.

It occurred to me that, maybe, failure to win a prize in the PHOTO-ERA competitions is not the main thing that stops some workers. It might be dissatisfaction with the size of the results as compared to the effort—the failure in competition being only one indication of it. If this letter is of interest to you, I shall be glad that I wrote it. With best wishes for the prosperity of PHOTO-ERA, I am

Very truly yours,

A. M. HOLCOMB.

The Value Appreciated

ONE of the leading pictorial workers expresses himself as follows with regard to our monthly competitions: "It is no small honor to get an award from the judges of PHOTO-ERA competitions. They set such a high standard and have so many first-class workers submitting their work to them. It keeps me keyed up all the time, trying to improve and better my pictures."



ON THE GROUNDGLASS

WILFRED A. FRENCH



Editing Photographic Copy

READERS of PHOTO-ERA who appreciate good English may not be aware that many of the articles and reports sent to this magazine are not printed as they are received. Far from it. They are written in all seriousness in a careless conversational style, punctuated with violations of grammar and orthography, incongruous sporting-terms, rapid change of pronouns (no uniform adhesion to a particular one), and, frequently, with a strange disregard for accuracy of facts. Instead of publishing such copy in its original form, and thus subjecting the writers to ridicule, the Editors eliminate as many errors as possible, without affecting the writer's individuality—although, it must be admitted that his style consists wholly of the use of objectionable or, rather, incongruous terms—and, when it means the rewriting of the whole article, the copy is returned to the writer.

An error that is quite common with careless or inexperienced writers, is the indiscriminate use of the pronoun, as is illustrated in the following paragraph: "In making an indoor portrait, *one* should choose a room with plenty of distance. *You* should place *your* (the) sitter in a comfortable chair and see that *they* are not disturbed. *I* make it a rule to put the sitter in a happy frame of mind before taking (photographing) *them*. If *she* is nervous, *I* ascertain the cause and change the subject. *You* should try and (to) avoid any unpleasant topic of conversation. *Those* that refer to *her* personal appearance make a big mistake. A little flattery goes a great ways (way). *They* should avoid using a lens of too short a focus. *You* should try and (to) use a regular portrait-equipment if possible, as a landscape lens gives too much definition. *I* try and (to) find out what successful professionals use, and hire a lens like it from *my* photo-dealers. *Pay* a friendly visit to some big professional, and *they* will be glad to give *us* amateurs a friendly and practical tip (advice)."

Why does the writer not use the pronoun corresponding to the first, second or third person, singular or plural, throughout, and be consistent? It would be just as clear and forcible for him to talk in the first person singular and, when making suggestions, to appeal to one person, using the third person singular. Besides, in referring to a person (no name or sex implied) it is correct to use the masculine pronoun, as, "If one (a person, anyone, anybody) wants to make portraits, *he* (not *they*) should give preference to the use of a regular portrait-lens." In this case, the pronoun, *he*, refers to either sex—man or woman, and does not imply any preference for the male sex.

Another common practice among young writers is to employ the possessive case *your*, when the definite article (the) would serve better and its use avoid monotony. I am sure that almost anyone would prefer a change in the following piece of advice quoted from a cotemporary, "First place *your* tripod firmly on the ground. Next screw *your* camera to *your* tripod, and swing it round (around) towards *your* picture. Place *your* head under *your* focusing-cloth, focus *your* picture, set *your* shutter, insert *your* plateholder and you are ready to take (make) *your* picture." The italics are ours.

If correspondents who desire their contributions printed in the pages of PHOTO-ERA would kindly use a little more care in expressing themselves, grammatically, they would save the overworked Editors much valuable time. Fortunately, their number is not "legion," but constitutes a small percentage of a large aggregate.

The Meaning of the Degree Ph.D.

THERE are some people whom it is very hard to satisfy. For instance, in response to a number of requests from sympathetic subscribers for a history of the Editor, there was published in the issue of July, 1919, a thrilling though somewhat condensed history of the Editor. It must have been received with approbation by the readers of the magazine, although a few expressed themselves as being not quite satisfied with the information that had been supplied by the autobiographer. Among the items on which information was desired was the degree of Ph.D. The Editor pleads guilty of negligence in this respect, but is glad to comply with the request made by these interested friends. In view of the fact that the bearer of this distinction was graduated from a distinguished European university, is at least on speaking terms with several foreign languages, and has a practical knowledge of matters photographic, the mystic letters Ph.D. may stand for Doctor of Philosophy, Doctor of Philology or Doctor of Photography. The acceptance of one or all of these interpretations would depend upon the number of years the inquirers have been subscribers to PHOTO-ERA.

Trust not Ouija

THE Boston *Traveler* relates the following story: "A Boston man arrived at his hotel in New York the other day and immediately called for a Ouija-board. He had lost his handbag. Ouija was produced, and instructed him: 'Collar place—depot.' He accordingly hustled back to the station and to the haberdasher's shop, where 'he remembered having stopped for some collars.' He found the handbag. Wonderful! But what did the Ouija-board have to do with it? It told him nothing but what he had in his mind already. A person of ordinary intelligence would have racked his brains and remembered where he left his handbag, without bothering Ouija to spell out the answer. Before the Ouija-board is given too much credit for supernatural performances, it will be well to discount heavily for the purely natural ones."

Now we wonder if the plan of the forgetful Boston man is followed by the camerist who, on arriving home, lays a package of roll-films on the table and then realizes that he has left his camera somewhere; but where, he can't remember. Will he consult the Ouija-board? If so, it may spell out the word "Manicure." With wife looking on, he'll get precious little sympathy—maybe something else.



EVENTS OF THE MONTH

Announcements and Reports of Club and Association Meetings, Exhibitions and Conventions are solicited for publication



Eastman Amateur Competition

PRIZES amounting to five hundred dollars will be awarded by the Eastman Kodak Company in a prize competition for amateurs. In judging the prize-competition entries, five factors will be considered: Attractiveness of the subject; composition; interest of the idea in the picture; appropriateness of the setting and quality of the photography. Competition closes May 1, 1920, and pictures must have been made prior to February 15, 1920. For a list of prizes, rules, regulations and general information address Prize Competition, Advertising Department, Eastman Kodak Company, Rochester, N. Y.

The Pittsburgh Salon

O. C. REITER, the active president of the Photographic Section of the Academy of Science and Art of Pittsburgh, states that the Pittsburgh Salon, this year, is a brilliant success. The pictures are hung and arranged, with exceptional artistic effect, in one of the finest galleries of the Institute. The Pittsburgh Salon will be described and illustrated in the May issue of PHOTO-ERA. Readers who obtain their copies of the magazine at their dealer's, should leave their orders in advance.

The Capitol Camera Club

ACCORDING to news received from John W. Newton—several times first-prize winner in our Advanced Workers' Competitions—the Photo-Pictorialists of Columbus, Ohio, is a body of workers that commands attention. It held an exhibition, recently, of members' work, which established a high artistic standard and elicited high praise from the art critics of the local press. The Photo-Pictorialists of Columbus is an organization limited to twelve members, with a present membership of eleven, all business and professional men who are working for pictorial effects in photography. Incidentally—Columbus is the third largest city in Ohio.

Photographic Books

WE are glad to call attention to the editorial statement which appeared recently in *The Amateur Photographer* with regard to photographic books. Anyone not practically engaged in publishing finds it hard to understand how it is that at the present moment so many of the standard technical handbooks are out of print; but a moment's thought will show that it is inevitable. Works of this kind are not published with the prospect of selling right out quickly; they are essentially volumes which enjoy a steady and continuous, rather than a rush sale. In recent years, the costs of book-production have increased to at least the same extent as those of other articles; and although the selling-prices have also risen, many a business-man has hesitated to prepare an edition, at present costs, when he knows that the sales must be spread over the next few years, when the high prices now prevailing may no longer be accepted as inevitable. The result has been that books have gone out of print and have not ap-

peared in new editions; and we are constantly having to tell enquirers that there used to be books on the subjects which interest them; but that these are now only obtainable second-hand. Although the cost of printing is still very high, we hope that this state of things will gradually right itself; but for the present, at any rate, there is nothing to do but to exercise patience. In this, as in other directions, the recovery from the war can only be a very gradual process.

A Letter from an Old-time Daguerreotypier

THE letter printed below is from a photographer who was famous in his day. He not only was identified with the beginning of photography in this country, gaining a high reputation as a daguerreotypier, but being equally skilled in all the processes that followed, namely the Ambrotype and the wetplate. He is one of the photographers of whom New York had every reason to be proud. The letter is the property of Philip Conklin, the well-known portrait-photographer of Troy, N.Y., who offered it to be published, as a curiosity, in this magazine. It should find a place, eventually, in the photographic section of the American National Museum, the Smithsonian Institution, Washington, D.C. But here is the letter.

NEW YORK, Dec. 23, 1843.

MR. BRUNCKS:

Dear Sir: I received a letter from you wishing me to send you instructions for making pictures. Well; in the first place, put in your first coating-box about $\frac{1}{2}$ ounce of dry iodine. In your second box, put in a half a wine-glass full of water. Add to it 20 or 30 drops of Griffin's chloride, or mixture, as he calls it. This, I presume, you have got, as it is in the same directions I gave Denton. When you coat your plates, coat them over the first box to a light yellow; then over the second to a dark yellow or a little shading on a purple. This is the preparation I use mostly. Or you can use chloride of iodine alone mixed with water. If you use this, pour in your box a wine-glass two-thirds full of water; add to it about a teaspoonful of Chilton's chloride of iodine; shake it up and let it stand overnight and it will be ready to use. Coat your plate over this to a shade on a purple. The first preparation will take in about one-third the time that this will. When you put your plate over the mercury, heat it up to about 60°. Never heat it above that; but you may have to heat it up 2 or 3 times before it is out enough to make the gold color on jewelry. You must get some gold-dust. It generally comes in little cups the same as fine watercolors do, sometimes. This you will be able to get at the book-sellers or druggists. Take a fine-pointed camel-hair brush; wet the point and touch it to the gold. The gold will adhere to it; then touch it to the picture wherever you wish it to show. I have now given you the important items, the same in every respect as I use them myself, and I hope they may prove beneficial to you.

Yours truly,

J. GURNEY.

To Facilitate Mail-Deliveries

PLEASE put on all your letters, in large figures, in the lower left corner, all by itself, the number, 17. This represents the postal district of PHOTO-ERA magazine, and will be seen by the sorting clerk more quickly than any part of the address. Let us try it and see how it works.

Who Gets the Credit?

EDITOR PHOTO-ERA MAGAZINE:

Dear Sir: In your last number (February), I notice an inquiry entitled: "Who is the maker?" in the case of a negative made by a tyro (a typical snapshooter), which, if taken in hand by an expert, worked up, enlarged and put through all the processes and arts of which he might be master, finally produces a gem.

As a humble worker in the snapshot-class—and a rather poor one at that—it seems to me that the expert is most decidedly the maker, for he has produced a beautiful thing, which the tyro has not.

I realize that the tyro has been a means to an end, and without his negative—probably an accident—the expert could not have produced the finished picture. But might it not be said that the camera-maker, lens-maker, paper-maker, chemical-maker, etc., also contributed each his effort, and thus was entitled to claim the credit for the successful result?

In looking at some of the exquisite reproductions in PHOTO-ERA, during the past few years, I have learned much of value to me in my efforts to produce good pictures, and I hope some day to have one or two accepted in the competitions—for a little kindly criticism of our work is healthy for us all. And in studying my own poor negatives for faults—even I can easily find them—I can get ideas for avoiding future mistakes of one sort or another. And if some expert should discover merit—though deeply hidden in one or two of them, I should certainly be extremely grateful to him for working them up into good pictures, for I should learn what it was possible to do with failures in skilled hands. Credit would not be due me for producing a failure; credit should belong to the man who produced the success, and in such an instance, as that mentioned by your correspondent, I should register my vote for the *successful* man, with the tyro as an aid to the beauty of the finished product, but only as an aid.

Very truly yours,

February 24, 1920.

CHAS. F. EDWARDS.

The Old Painters Vindicated

The old masters who have had their paintings defaced by subsequent brushwork will learn with satisfaction in their abiding places that at last some means have been found to prove what they really did paint. Dr. Heilbron, of Amsterdam,—in a communication to the recent combined meeting of the Röntgen Society and the Royal Photographic Society—told how certain old Dutch paintings which had been suspected of subsequent falsification had been photographed by the X-rays, with the result that the later additions to the originals had been well and truly exposed. It seems that there is some difference in quality between ancient and more modern pigments, whereby the X-rays go right through the latter, so that the pigments leave no shadow to speak of, and are intercepted by the former, which results in the photographed image. Thus the X-ray negative shows the painting as it came from the

master's hands, and not as it has been touched up by his successors. Dr. Heilbron showed some remarkable photographs of paintings as the eye saw them and as the X-rays saw them, showing how complete was the detection, by simple obliteration, of the later work.

The Amateur Photographer.

Boston Y. M. C. U. Camera Club

THE annual members' show of the Boston Y. M. C. U. Camera Club was held in the gallery of the club, at 48 Boylston Street, Boston, during the entire month of March. The one hundred and twelve prints shown represented the work of the club at its best, and included examples of the artistic ability of several new members. Among the landscapes, the work of two eminent workers, R. E. Hanson and G. H. Seelig struggled for supremacy. Both men won. Mr. Hanson displays a sincere love of nature, a true artistic temperament and a pleasing familiarity with the rules of pictorial composition. He won the blue ribbon for a picture of snow-covered sand-dunes which was an effect rather than a formal arrangement. A view of Duxbury, which gained him the red ribbon, was attractive in subject and beautiful in tone, but was a trifle symmetrical in design, otherwise it would easily have been the finest of the landscapes on view. It received the red ribbon. Mr. Seelig, as always, excelled in composition, tonal values and atmospheric qualities, but failed to please the jury, except to win an Honorable Mention for an exquisite wood-interior in winter, entitled, "Towards the Western Sun." W. E. Burwell had a number of superb winter-scenes showing fine feeling and artistic arrangement, No. 35 being a notable piece of work.

In the portraiture-class, where too much must not be expected, were several delightful examples of lighting, arrangement and expression, notably a profile of a young girl in a fur-coat (red ribbon) by E. R. Morton, a new member; one by the president of the club, M. L. Vincent (beautiful flesh-tones), and another, by Louis Astrella, of a smiling Italian girl—Natalie. The blue ribbon was awarded to Mr. Astrella for a portrait of a smooth-faced, spectacled man, the print being very low in tone.

The genre-class contained many good things, the best, to our mind, being the figure of a French Peasant-Girl (apologies to Jules Breton) by R. E. Hanson. However, the jury awarded the blue ribbon, as well as the gold star on a white ribbon, to a beautiful full-length nude, by H. C. Shaw, and the red ribbon to "Avarice" (a profiteer counting his ill-gotten gold), by Louis Astrella. "Joan," by A. H. Blackinton, received Honorable Mention. The general-class was liberally represented. The blue ribbon was brilliantly merited by W. J. Jaycock for a wonderfully fine view of sea, land and sky, with two sea-gulls, well spaced, soaring high above. The red ribbon was awarded to A. H. Blackinton for a delightful composition—two girls walking (away from the beholder) along a beautiful beach. Honorable Mention was given to S. A. Akasu for a picture of two dolls expressing the sentiment, "Home, Sweet Home." In the marine-class, the blue ribbon went to A. H. Blackinton for "A Rainy-Day Reception"—a stirring, dramatic portrayal of the arrival, in Boston Harbor, of the U.S.S. Mount Vernon with President Wilson aboard, and met by numerous steamers and tugs. S. A. Akasu won Honorable Mention for an admirably composed view at Rockport; but the red ribbon was captured by G. H. Seelig, for "Gloucester—An Impression." The club has now eighty-two members—active, ardent and progressive.



LONDON LETTER

CARINE AND WILL CADBY



AFTER an interval of six years, during which the war has kept non-combatants confined to England, we are again visiting the high Alps, and readers will perhaps forgive us if we make this, as in old pre-war times, our holiday-letter.

Swiss winter-sports-centres are again open this season for the first time since the war, and English people have come in great numbers for a holiday in the snow. The same indoor-games, the same outdoor-sports, and the same universally high spirits prevail. Cameras are even more generally noticeable among visitors than in old times, and the younger generation seems to be making the same photographic mistakes as did their predecessors—six years ago. As we write, we can see from our window a party of guests departing. The sledges are drawn up at the hotel-door, and many films are exposed during the “good byes”, that could in no possible circumstances yield satisfactory results. Kodak’s classic phrase, “You press the button, we do the rest,” no doubt comforts and cheers these irresponsible camerists, and many of them seem to think the big firm are magicians who can convert anything in the way of an exposure into an eventual good print.

But we notice that there are others who withhold their hand, if conditions are not satisfactory. Many of these have had experience in photography during the war in some official capacity under the War-Office. Some have learned camera-craft in airships, others have been photographers in reconnoitering airplanes, and, again, others have zealously learned their business at the dull and mechanical work of developing military exposures at some base in France. These are, however, a small minority, and most of the visitors are interested in photography only from the snapshot-point of view. As we have already said, kodaks are universal, and views, spots and picnic-parties are, if the light chances to be good, immortalized. But the great vogue, this year, has been for farewell-groups. Just before leaving the hotel, the sadly returning guest, robed in somber traveling-garments, asks his or her particular friend to stand outside the door, and the group is snapped, and a reminiscence secured. But there is more in this than meets the eye, for we have known little cameras that have cemented hotel-friendships till they have ripened and blossomed into real and lasting ones. And still greater issues have been involved: we have witnessed the apparently innocent exchange of snapshots start a correspondence that has resulted in—well, in a still more lasting relationship even than friendship.

But among this crowd of irresponsible photographers, we have come across one who takes her art so seriously that she is here to get away from it! She is one of those clever amateurs who, six years ago, turned her talent to account, and has started a studio at one of our Northern seaside-resorts. She worked for some time with Miss Olive Edis and, like her, devotes the summer to making portraits, the autumn to getting them printed and the remainder of the year to a rest and a holiday. How necessary this is, only photographers know; for it is impossible for outsiders to realize what a strain portraiture is when one aims at suggesting not only the exterior, but the real character of the sitter.

These Swiss winter-hotels, that cater only to Brit-

ishers, are at the moment epitomes of English social life. The Army, the Navy, and the Air-Service are well represented—there are diplomats, civil servants, big manufacturers, and a sprinkling of the *nouveaux riches*, people who have become wealthy during, and often because of, the war.

On January 20 an exceedingly interesting photographic expedition was made in Switzerland. A hydroplane, for the first time, flew over the Swiss Central Alps, closely followed by a biplane containing two kinema-operators. It is reported, locally, that they obtained splendid pictures which will shortly be shown in various European capitals. One imagines the leading airplane will figure largely in the photographs, with a wonderful background of snow-covered mountains, as a finer setting for aircraft-pictures cannot be imagined.

We have, this winter, included in our photographic kit a goodly stock of Kodak Portrait-Films for use with the large (half-plate) camera. These films, as our readers probably know, are not mounted, but packed closely together in dozens. They are not only light, but take up very little space, so are particularly convenient when one is traveling. Thin metal frames are provided for use in the plateholders, into which they are easily slid, and so kept rigid and in their correct position for exposure. They are orthochromatic and, being thin, are more than equal to a backed plate. We have found them extremely satisfactory in use, as there seems to be a great amount of latitude. Besides this, on tour, when one often has to extemporize a bedroom into a darkroom, they are very handy, as six or eight can be developed at once by continually passing them from one dish of developer to another, just in the same way as when toning printing-out-paper prints, and all can be fixed at the same time in one dish of hypo, if they are moved occasionally to allow of free play for the action of the chemicals. When dry, they can be packed in a fraction of the space required for the same number of glass plates, and they do not materially add to the weight of our luggage, a quite serious consideration where much work is being done.

For our hand-camera ($2\frac{1}{2} \times 3\frac{1}{2}$ in Newman and Guardia “Sybil”) we have Imperial N. F. backed plates of specially thin glass, and find if used with a K. 1 screen (Wrattan & Wainwright) they render the blue skies of the Alps about right—that is, not too dark, as one often sees them reproduced, and yet with tone enough to show any little white, fleecy clouds that may be in the sky.



A Spring Request

A SAD feature of the literary-test is the case of twelve Italian girls who came to the United States, recently, to marry American soldiers; but because they could not speak English, the signoras were allowed sixty days in which to learn our somewhat difficult language. As spring will be in full bloom at the expiration of the time-limit—spring with a beauty unknown to the dozen Italian maidens, an observant citizen may likely overhear the dulcet plea, “Caro mio, buya me a kodaka.”



BOOK-REVIEWS

Books reviewed in this magazine, or any others our readers may desire, will be furnished by us at the lowest market-prices. Send for our list of approved books.

PHOTOGRAPHY—ITS PRINCIPLES AND APPLICATIONS.

By Alfred Watkins, F. R. P. S. Second edition, revised. 333 pages. Fully illustrated. Cloth, \$3. Postage, according to zone. Weight, two lbs. New York, U. S. A.: D. Van Nostrand Company. 1919.

If the camera-user—be he novice or advanced worker—desires a book that treats the principles and applications of present-day photography with exemplary clearness and accuracy, he will choose the latest edition of *Photography*, by Watkins. The author, a brilliant and experienced technician, prepared this new standard work with but one purpose in mind—viz., to present the purely practical side of photography, to the exclusion of the evolution of the art, in which Britain, Germany and France each performed its share; the picture-making aspect of the handicraft, and much interesting information that more properly belongs to the realm of the cyclopædia. Therefore, the material treated in this volume is all the more exhaustive and diversified, and yet is presented complete in detail, as well as distinctly and convincingly. In describing his methods in exposure and development, Mr. Watkins has devoted conspicuously interesting chapters to the subjects of light, illumination and tone-values that are of positive benefit to the technical worker, in that he will not only comprehend the reasons of these physical differences and variations, but execute more intelligently and, consequently, more successfully his technical operations. Even the novice, for instance, rarely knows why his exposures in a narrow street are usually undertimed, whereas this is not the case with those made in an open, unobstructed space; nor why the slightest overdevelopment of a plate containing clouds often causes the loss of the latter. These, and many other failures, are elucidated by means of illustrations. Of course, the experienced worker and professional technician, too, meet perplexing problems, all of which, together with a host of others, will be found, clearly explained, in the present volume. Briefly, all the operations in the field, the studio, the darkroom; every modern printing-process; color-photography; every application of photography, whether to professional work and to scientific research-work, in all their diversities and operations, including radiography, survey (record) photography, pinhole-photography; aëro-photography, telephotography, photo-micrography, spectro-photography, and plate-speed testing, form the subject-matter of a book, which, if consulted freely by the progressive worker in photography, will increase his technical proficiency.

The Photographer's Excuse

"The photographs you've made of my husband are terrible. He looks like a monkey."

"Alas, Madam, that is so; but no fault of mine. You should have ascertained that fact before you married him."

Varied Uses of Radiography

THE previously uninstructed visitor to the present X-ray exhibition at the Royal Photographic Society's House—the first exhibition of X-ray prints on any large scale in London—will marvel most at the remarkable number of uses to which X-rays are now put, in addition to what many people think to be their sole purpose—that of affording assistance in medical and surgical diagnosis. Here, for example, is the radiograph of a carburetter showing defects in castings, and other radiographs showing faults in airplane construction, faulty workmanship being exposed with an unerring finger. Then, again, there are radiographs of motor tires, which show the quality of these things as no superficial examination can hope to do. The advent of X-rays in industry should be a black day for those who do shoddy work. X-rays seem likely also to be applied to criminal investigation. The skin of the hand is covered with a certain lead salt and radiographed, whereupon there is secured a finger-print which has the advantage of showing no blurring of the lines. Then, of course, there are natural history applications; to flowers, for example, which require specially soft tubes; to seashells, which show an undreamed-of beauty by this method; and to reptiles, which have quite a decorative character when all their bones are visible.—*The Amateur Photographer*.

Home-Made Safe-Lights

ALTHOUGH, as a rule, it is advisable to use the safe-lights which are sold for darkroom-illumination, many prefer to make their own, either on the score of economy or because the ready-made article will not fit their windows or lanterns, states *The British Journal*. Every year seems to see an increase in the sensitiveness of plates, and it is necessary, from time to time, to overhaul the lighting-arrangements to make certain that any fog or flatness in the negative does not arise in the darkroom. In practice, we have found that the ruby fabric sold for the purpose is fairly safe, if ordinary care is exercised. A combination which we have found satisfactory is two thicknesses of ruby fabric sandwiched between one piece of clear glass and one of pot orange or, better still, the kind known to the dealers as "Perfection" glass. This is stained with copper and is safe for ordinary plates if used alone. The glasses should always be bound together, lantern-slide fashion; but a waterproof binding, such as rubber plaster tape or electric insulating tape, must be used. When daylight is the illuminant, the yellow or orange-glass should be placed outside, as this will postpone the fading of the fabric which sooner or later renders it unsafe. Generally, however, daylight is to be avoided for the illumination of the darkroom, unless the working-conditions—such as extremely small cubical space—prohibit the use of artificial light.

An Attractive Remedy

DEMONSTRATOR (calling on studio-proprietor): "I guess we'll have to call off the demonstration, this evening, as I have a terrible toothache. I wonder if you can suggest something to cure it."

STUDIO-PROPRIETOR: "Now, you don't need any medicine. I had a toothache yesterday, and I went home and my loving wife kissed me, and so consoled me that the pain soon passed away. Why don't you try the trick?"

DEMONSTRATOR: "I think I will. Is your wife home?"



WITH THE TRADE



Kodak Wins in Lewis Suit

THE United States District Court in New York City recently handed down a decision, dismissing a suit brought by Julius L. Lewis against the Eastman Kodak Company.

Mr. Lewis, for more than twenty years, has been a dealer in photographic supplies on Sixth Avenue, in New York City. He sued the Kodak Company for treble damages under the Sherman law, amounting to \$3,000,000, claiming that the Eastman Kodak Company was a monopoly in restraint of trade. He declared to have suffered damage by reason of the Kodak Company having refused to sell to him its products because of his refusal to comply with its terms of sale. The case was tried before United States Judge Julius M. Mayer and a jury. The plaintiff occupied a week in presenting his evidence to the Court and, at the close of his case, Judge Mayer dismissed the case, holding that the Eastman Kodak Company's terms of sale were not in violation of the Sherman law at the time they were in force, and that the plaintiff had not suffered any damage. No evidence was offered by the Kodak Company.

In announcing his decision, Judge Mayer stated that there were several grounds other than those mentioned, upon any one of which it would have been necessary for him to dismiss the case. Lewis' attorneys have announced that no appeal will be taken.

Rexolon—Developing-Agent

WE are pleased to call attention to Rexolon, an American-made developing-agent manufactured by Burke & James, Inc., of Chicago and New York. This developer is non-poisonous, produces good blacks and whites, is distinctive for its non-oxidizing qualities, does not fog paper under severe tests, is chemically pure, energetic and lasting. Rexolon should be handled in the same manner as Duratol, that is, dissolved separately from the other chemicals in hot water. The advantages of this developer are practical and worth investigation.

City Sale and Exchange, London

IN the absence of copy for the advertisement, in the current issue of PHOTO-ERA, of the City Sale and Exchange, London, England, interested readers are respectfully referred to the firm's full-page advertisements in the February and March issues. These rare and standard equipments, offered by this enterprising English house, and at their relatively low prices, have created a wide-spread interest throughout this country.

A Unique Photo-Finisher

THE average snapshotter, unable to develop and print his exposed films, takes them to the most convenient photo-finisher. If the prints are poor, either too faint or too contrasty, the customer has no redress, and the faults are usually attributed to underexposure. So he accepts philosophically the very indifferent prints,

sighs, and that is the end of it. Had he taken his faultily exposed films to an expert, one who would give them special attention, and pay the slightly increased price, he would have better pictures. He would also be able to get enlargements—a joy instead of a sadness to look upon. Knowing how rare is a really expert and experienced photo-finisher, one who will give the best possible individual care to every film entrusted to him, we take pleasure in endorsing Mr. Henry J. Wiegner, the proprietor of the Photo-Shop of Philadelphia, which merits a place on our Blue-List page. He also does a successful and satisfactory mail-order business. Give him a trial.

The New Smith Synthetic Lens

WE are pleased to announce that Pinkham & Smith Company, Boston, Mass., is again producing the popular Smith Soft-Focus lenses. There are now seven series, which include the Semi-Achromatic, Visual Quality and Synthetic. The last-named is the newest type and has met with an enthusiastic reception at the camera-clubs in Columbus, Indianapolis and among the Pictorial Photographers of America in New York where it was introduced by the well-known lens-technician, Walter G. Wolfe, of the Pinkham & Smith Company. Interesting descriptive matter may be obtained from the makers. Owing to the demand, orders are being filled in the order received.

Meteor Chemicals

THE importance of carefully prepared photographic chemicals cannot be overestimated. John G. Marshal, Manufacturing Chemist, Brooklyn, New York, is now preparing his products for discriminating photographers. Meteor Chemicals may be obtained from reliable dealers. Mr. Otto Goerz, well-known to the trade, is sales-manager.

The Hanovia Soft-Focus Lens

THE interest in pictorial photography was never greater than at present. This branch of photography requires—in very many cases—the use of a soft-focus lens to obtain the desired results. In the Hanovia Soft-Focus Lens, made by the Hanovia Chemical and Manufacturing Company, Newark, New Jersey, we have an innovation in lenses of this type—it is made of pure quartz. What it can do is shown convincingly in this issue.

An Ambiguous Advertisement

DURING a conversation between a local photo-finisher and one of his customers, in Bromfield Street, recently, the former remarked, "I'm going to put up a sign in my window to read:

"You can't get any better, no matter what you pay!"

"Good idea; but did you ever think what a poor advertisement it would be for a sanitarium?"

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We also welcome desirable samples of work done with our PROTARS—those truly convertible lenses which are practically universal in application, giving any angle of view desired for near or distant objects.

Please submit glossy prints for inspection, although, if acceptable, we prefer to buy the negatives outright in most cases. Let us see some of your best Tessar and Protar work; we are prepared to pay satisfactory prices.

Both airship photographs reproduced above were taken by Francis A. Korff, Brooklyn, N. Y.

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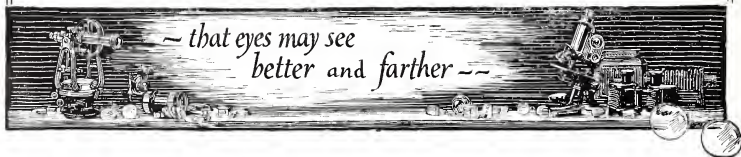
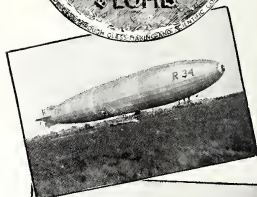


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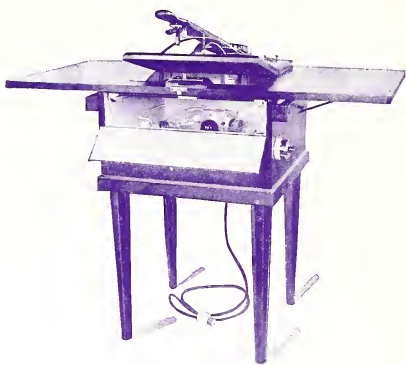
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PHOTO-ERA

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Telephotography

EDWARD LEE HARRISON



TELEPHOTO-OBJECTIVE may be defined as a lens-combination forming a relatively large image with a small camera-extension. This implies a comparatively long equivalent focus with a short back-focus. The necessary elements of such a combination consist of a positive lens for the formation of a primary image, supplemented by a negative lens which enlarges this image by intercepting the rays forming it and carrying them to a focus at a greater distance from the entrance-pupil. The linear magnification that results from this change in focus is dependent upon the relative separation of the two lenses, and their respective distances from the focusing-screen. The instrument is virtually a photographer's telescope. Objects at a distance, architectural details, engineering-data, and marine-subjects can be photographed on a large scale with a comparatively short camera-extension.

The first part of this article will indicate briefly the elementary theories and formulæ that govern the telephoto-lens, with examples worked out by ordinary mathematical calculation. The second part will deal with the practical application of these formulæ, the telephoto-objective constructed by the author—and used in making several of the illustrations for this article—will be described and illustrated for the benefit of any readers who may wish to make their own telephoto-lenses.

As stated previously, the telephoto-objective consists of two units: a positive lens capable of throwing an image upon the photographic plate, and a negative lens of suitable focus to magnify this primary image. We are concerned, first, with the properties of the positive lens, which in this case we will assume to be a corrected anastigmat lens of the average type. The first step is to know its focal length, as from this factor we deduce the scale of its image. Usually, the

manufacturers' markings are sufficiently accurate; but we will determine this factor for ourselves and be independent.

The simplest and most direct method to determine the focal length of any lens-system is to institute a comparison between its image and one thrown by a pinhole-lens, the focus of which is easily measured. In both cases, the focusing-screen must be the same distance from the object upon which the lenses are focused.

Example A. To determine the height of image thrown by pinhole-lens:

Distance from pinhole to object = 240 inches.

Distance from pinhole to focusing-screen = 8 inches.

Height of object = 60 inches.

Height of image = $60 \div \frac{240}{8} = 2$ inches.

Example B. To determine the focus of the lens-system:

Height of object = 60 inches — distance screen to object = 248 inches — same as before. Focus on object and measure height of image.

Focus of lens expressed by ratio, 8 inches : x :: 2 inches : Y .

Y = height of image thrown by lens, say $2\frac{1}{4}$ inches in this case.

$\therefore 8$ inches : x :: 2 inches : $2\frac{1}{4}$ inches. $2x = 18$ inches. $x = 9$ inches. = Required focus.

Although this method — being graphic — is a close approximation only, it is sufficiently accurate for all practical purposes. There are a number of very scientific and complicated formulæ to determine the focal strength of compound lenses; but, personally, we have never had much luck with them.

The scale of the image is directly dependent upon two factors — the focal length of the lens and the distance that separates the focusing-screen from the object.

Example: We will assume that we have an object 40 inches high and wish to render it on

the screen 4 inches high. The focal length of our lens is 9 inches. Our scale ratio is $4/40$ or $1/10$. Hence — the distance of lens to object = $(10 + 1)$ times the focal length of the lens = 11 inches $\times 9 = 99$ inches. The distance of lens to image — or, in other words — the focus, in this case = $\frac{10 + 1}{10}$ times the focal length of lens = $11/10 \times 9 = 9.9$ inches. The unit 1 added above, represents one focal length of the lens, which must be deducted from the relative magnification, as it represents the front focal point, according to the law of conjugate foci. Now,

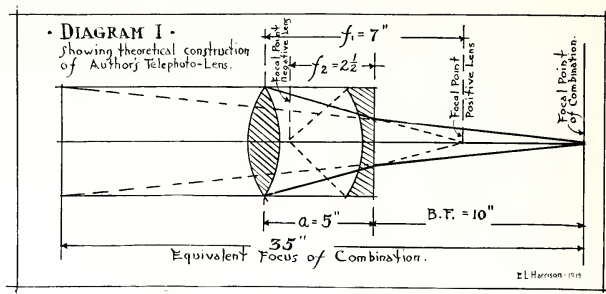
Size of image = 42 inches $\div \left(\frac{56}{7} - 1\right) = 6$ inches, a ratio of $1/7$.

Using the same data, but a 14-inch lens.

Size of image = 42 inches $\div \left(\frac{56}{14} - 1\right) = 14$ inches, a ratio of $1/3$.

And the closer the object is, the greater will be the departure from the direct ratio shown at infinity.

We will now point out some interesting facts that concern the negative half of the combination. A negative lens disperses rays of light,



for the benefit of those who do not know what the last two words mean, we will explain. Let us assume that the lens is of 20 inches focus and the object is 200 inches away from it. It is, therefore, distant 10 times the focal length of the lens; but only 9 times from the front focal point — every lens has a front and a back-focus — so that the “conjugate” will be $1/9$ of the focal length beyond the back focal point; hence, the scale-ratio will be one to nine, or $1/9$, and an object 9 inches high will be imaged 1 inch high, on the screen or plate.

The image-scales of two lenses working at infinity are directly proportional to their focal lengths. Thus, if a lens of 10-inch focus renders an image 2 inches high, one of 20-inch focus, working from the same position, would render an image 4 inches high. But for distances less than infinity, the case is different, and as this fact has a direct bearing on telephotographic formulæ, we will figure it out.

Let us take an object 42 inches high situated 56 inches from the optical center of a lens of 7-inch focus.

instead of converging them, as a positive lens does. Moreover, a negative lens will not of itself form an image on a screen. In the case of the telephoto-lens it is used to intercept the rays of light from the positive lens, and bring them to a focus at a point more distant from the entrance-pupil, thereby enlarging the image.

To determine the focal length of any negative lens, focus on an object with an ordinary positive lens and measure the image. Fix the negative lens behind the positive in a position to intercept the rays forming the image, focus the combination and measure the new image. Now note the following data:

1. The distance from the back of negative lens to the image = B^1 .
2. The magnification or ratio of enlargement of the original image = R^1 . For example, if the original image is 2 inches high, and the one formed by the combination 6 inches high, the ratio R , will be 3.

After this is done, move the negative lens a short distance nearer the positive, fix in position — without changing the position of the positive



OVER THE CITY

EDWARD LEE HARRISON

lens—and focus. Take the same two observations, calling the new back focus B^2 and the new ratio of enlargement R^2 . Then the focal length

of the negative lens = $\frac{B^2 - B^1}{R^2 - R^1}$. Having at our

command the means to determine the focal lengths of both our lenses, we will proceed to combine them in such a manner as to form a telephoto-objective, and to note the various properties of this combination. It may be observed that, as a rule, the best results are obtained with a negative lens of not more than half the focal length of the positive lens. (Diagram I.) See opposite page.

We will now deduce the following rules:

RULE I. The focus of the complete telephoto-objective is equal to the product of the focal lengths of its components divided by the amount of separation in excess of the difference of their focal lengths,

$$\text{or } F = \frac{f^1 \times f^2}{d} \quad \cdot \quad d = a - (f^1 - f^2).$$

RULE II. The back-focus of the combination—the distance from the negative lens to the screen—is formed by multiplying the focal length of the negative lens by the difference between the focal length of the positive lens and the entire separation, and dividing by the amount of separation in excess of the difference in focal lengths,

$$\text{or Back-Focus} = \frac{f^2 \times (f^1 - a)}{d}.$$

Example:

Focal length of positive lens = 7 inches = f^1 .

Focal length of negative lens = $2\frac{1}{2}$ inches = f^2 .

Interval of separation = 5 inches = a .

Amount of separation in excess of difference of focal lengths = $\frac{1}{2}$ inch = d .

$$\begin{aligned} \text{Focus of complete telephoto-objective} &= \frac{f^1 \times f^2}{d} \\ &= \frac{7 \text{ inches} \times 2\frac{1}{2} \text{ inches}}{\frac{1}{2} \text{ inch}} = 35 \text{ inches} = F. \end{aligned}$$

$$\begin{aligned} \text{Back-Focus} &= \frac{f^2 \times (f^1 - a)}{d} = \frac{2\frac{1}{2} \text{ in.} \times 2 \text{ in.}}{\frac{1}{2} \text{ in.}} = \\ 10 \text{ inches} &= \text{Back-Focus.} \end{aligned}$$

NOTE.—These figures represent the calculations and sizes used in the construction of the author's telephoto-lens.

It will be seen that by variation of this interval “ d ,” any focal length may be established, within the limits of the bellows-draw of the camera.

RULE III. To find the camera-extension or back-focus necessary for a given magnification, multiply the focal length of the negative lens by the magnification desired less one. Let us take the above case, which has a magnification of 5 times the positive image. Expressed in formula $\text{Back-Focus} = f^2 (M - 1)$, or, $\text{Back-Focus} = 2\frac{1}{2} (5 - 1) = 10$. ||

RULE IV. To find the magnification M for a given extension: divide the back-focus by the focal length of the negative lens and add one,

$$\text{Expressed in Formula } M = \frac{\text{Back-Focus}}{f^2} + 1.$$

$$\text{thus, } M = \frac{10}{2\frac{1}{2}} + 1 = 5.$$



THE CATHEDRAL

EDWARD LEE HARRISON

RULE V. To find the focal length of the telephoto-lens—working at infinity; or, in other words, for distant objects—multiply the focal length of the positive lens by the magnification.
 $F = M f^1$, or 7 inches \times 5 = 35 inches.

Also

$$F = m \times \text{B.F.} + f^1 = 2.8 \times 10 + 7 = 35 \text{ in.}$$

$$m = \frac{f^1}{f^2} = \frac{7}{2\frac{1}{2}} = 2.8 \text{ inches.}$$

In the above case, both formulæ check with the first formula.

We find from the above problem that with a camera-extension of 10 inches we obtain an equivalent focus of 35 inches.

We have seen that there is one ratio of magnification for infinity and another for near objects.

Problem:

Focal length of positive element $f^1 = 7$ inches.

Focal length of negative lens $f^2 = 2\frac{1}{2}$ inches.

Distance of object 56 inches.

Desired magnification, or enlargement-ratio
 $= 1/2 = \frac{1}{N}$. In other words we desire to make the image half actual size.

$\frac{1}{n}$ = ratio of enlargement of positive lens
 alone = $\frac{56}{7} - 1 = 1/7$.

M = magnification given by negative lens.

N = ratio of enlargement of complete telephoto-lens.

$$\frac{1}{N} = \frac{1}{n} \times M \text{ or } \frac{1}{2} = \frac{1}{7} \times M.$$

$$M = \frac{1}{1/7} = 7.$$

$$\text{B.F.} = f^2 (M - 1). \quad (\text{Rule III.})$$

$$2\frac{1}{2} (7 - 1) = 6.25 \text{ inches} = \text{Back-Focus.}$$

Focus of complete telephoto-lens:

$$F = m \left(\text{B.F.} - \frac{F}{N} \right) + f^1$$

$$\text{or } F \left(\frac{m}{N} + 1 \right) = m \times \text{B.F.} + f^1.$$

$$F = \frac{m \times \text{B.F.} + f^1}{\left(\frac{m}{N} + 1 \right)}$$

In the above problem

$$m = \frac{f^1}{f^2} = \frac{7 \text{ inches}}{2\frac{1}{2} \text{ inches}} = 2.8 \text{ inches}$$

$$f^1 = 7 \text{ inches}$$

$$f^2 = 2\frac{1}{2} \text{ inches}$$

$$\text{Back-Focus} = 6.25 \text{ inches}$$

$$\frac{1}{N} = \frac{1}{2}$$

$$F = \left(\frac{2.8 \text{ in.} \times 6.25 \text{ in.} + 7 \text{ in.}}{\frac{2.8}{2} + 1} \right) = 10.2 \text{ in.}$$

$$M = \frac{6.25}{2.5} + 1 = 3.5$$

Problem:

Assume an image 8 inches high.

Distance as above 56 inches.

By previous formula we find that the size of image formed by the positive lens alone =

$$\left(8 \div \frac{56}{7} - 1 \right) = 1\frac{1}{4} \text{ inches}$$

$$\text{and } M = 3.5.$$

Therefore, size of image = $3.5 \times 1 \frac{1}{7} = 4$ inches or half life-size as above assumed.

Having thus groped our way through the first maze of calculations, we will draw a long breath and proceed to figure out the image-circle, proper exposure and depth of focus.

In the first place, the circle of illumination—which governs the size of the plate which can be used—is found by the following formula, in which

D = diameter of image circle.

d^1 = aperture of positive lens (diameter).

d^2 = aperture of negative lens.

f^1 = focus of positive lens.

f^2 = focus of negative lens.

a = separation of two lenses.

Back-Focus = distance from negative lens to plate.

Reducing above formula to practice.

$$D = \frac{\text{Back-Focus} \left(\frac{d^1 f^2 + d^2 f^1}{f^1 - f^2} \right)}{f^2}$$

or in the case of the author's lens, for 5 inches separation of elements, giving a back-focus of 10 inches,

$$D = \frac{10}{2\frac{1}{2}} \left(\frac{1.55 \text{ in.} \times 2\frac{1}{2} \text{ in.} + 1 \text{ in.} \times 7 \text{ in.}}{7 \text{ in.} - 2\frac{1}{2} \text{ in.}} \right) =$$

9.68 inches

which is ample for general use.

It will be found probably, that on certain of the lower magnifications, involving the use of a shorter back-focus, the circle will be reduced by the lens-mouth. This is not generally of much inconvenience, the more especially as the telephoto is used mostly for details.

The proper exposure for the telephoto-lens varies directly as the square of the magnification. This means that for a ratio of five magnifications of the image thrown by the positive lens, twenty-five times the proper exposure for the positive lens alone must be given. For example, setting the original diaphragm-stop at F/11, and assuming that conditions require a 1/10 second exposure, the proper exposure for the complete telephoto-system working at five magnifications, will be $5 \times 5 \times 1/10$ second or $2\frac{1}{2}$ seconds. If a ray-filter is used, this exposure must also be multiplied by its factor.

It will be assumed at once that stopping down will increase the definition of the telephoto-lens. This is so, up to certain limits, and here our old friend Lord Rayleigh, with his pinhole-investigations again sets a limit of F/72. And again, as in the former pinhole-review, we must differ with the learned scientist. No doubt his conclusions were absolutely true with regard to the apparatus he used—whatever it was. But, in the case of the author's telephoto-lens, using a highly corrected and speedy lens of 7-inch focus, and an

ordinary achromatic and spherically corrected negative combination, uncorrected for astigmatism or flatness of field, the definition was noticeably improved, by the use of small stops, some of them less than F/72. It must be understood that no issue is taken with the scientific conclusions before mentioned, and the personal observations are given for information only.

The diaphragm-stop for the telephoto-lens must be determined with respect to the effective aperture and equivalent focal length of the combination; and, as a matter of course, has nothing to do with the stops marked on the positive lens. It is evident, therefore, that excessively small stops may be obtained unwittingly. In the above case, a telephoto-combination of 35-inch equivalent focus, the positive lens has 7-inch focus, and an aperture of F/16 on its diaphragm-scale would mean one of F/80 for the combination.

This stop appears to work excellently, although it is somewhat over the limit of F/72 set by the authorities; and, in point of fact, no difference can be observed in the crispness of definition of the author's lens for any complete-system stops between the ratios F/32 and F/110, using 35-inch focus, and corresponding to original diaphragm-stops of F/6.3 and F/22 in the positive lens.

As a sort of final problem in the theory of telephotography, we will determine the depth of focus of the author's combination. The terms front and back-focus here used, signify the number of inches forward and backward of the point focused upon which will be rendered sufficiently sharp for good definition. We have used 1/100 of an inch as the circle of diffusion, which, of course, must be divided by the ratio of magnification. In the case figured below, this is 5 and the diffusion-circle becomes 1/500 of an inch, a very exacting requirement, and one that demands the finest of photographic objectives as a positive lens.

$$\text{Front depth} = \frac{R^1 f^1 (R^1 + 1)}{500 S + (R^1 + 1)}$$

f^1 = Focus of positive lens.

R^1 = Image scale of positive lens alone.

S = Speed of lens, or diaphragm-stop of original lens-mount.

Using a 7-inch positive lens and a $2\frac{1}{2}$ -inch negative, spaced to obtain 35-inch equivalent focus, or a magnification of 5 times, and assuming an object 35 feet or 420 inches distant, with an original diaphragm-stop of F/8, we have for front-depth the following:

$$R^1 = \frac{1}{420} = \frac{1}{59} \quad \frac{1}{7 - 1}$$

$$\text{And } \frac{59 \times 7 (59 + 1)}{500 \times 7 (59 + 1)} = 50 \text{ inches.}$$

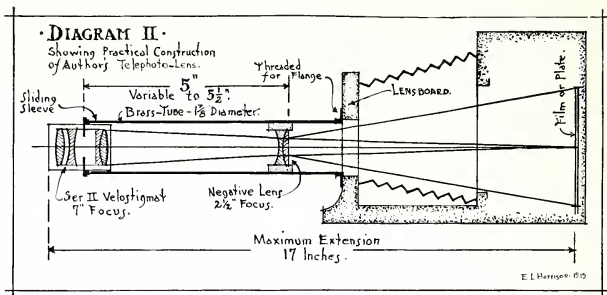
and for Back-depth:

$$\frac{59 \times 7 (59 + 1)}{8 \times 7 (59 + 1)} = 65 \text{ inches.}$$

And for an object 10 feet distant, same data, the front-depth of field works out 5.8 inches and the back-depth—6.6 inches.

The author has found that the various problems in telephotography are worked out quite readily on the logarithm slide-rule which will give results accurate enough for practice.

negative lens-tubes on the market. This made a very awkward fitting necessary. Being desirous to learn something of the subject, we went to the library and read up on telephotography. Then some hunting around resulted in finding a negative lens-cell—from an old style projection lens—of approximately $2\frac{1}{2}$ -inch focus. It appeared to be fairly well corrected achromatically, being double, and was rectilinear but not anastigmatic. It was thought that a fairly small stop would correct this defect, so a brass-tube about $6\frac{1}{2}$ inches long and slightly less than 2 inches in diameter was procured from our old friend, the plumber, threaded to fit the camera-flange, and the negative lens mounted therein,



Having in the first part of this article outlined the theoretical principles that govern the telephoto-objective, we will proceed to consider their practical application. The advantages and convenience of this instrument are so obvious and manifold, as to make its lack of general use a matter of remark to those who have availed themselves of its capabilities.

The first consideration is the apparatus itself. Some time ago the writer determined to equip one of his outfits with a telephoto-lens, and for the purpose of illustration we will describe the equipment and how it was made.

The outfit mentioned was an ordinary 3-A Graflex, using standard $3\frac{1}{4} \times 5\frac{1}{2}$ roll-films, and was fitted with a Wollensak Series II Velostigmat, of 7-inch equivalent focus, working at a speed of F/4.5. On account of this speed, the lens-mount was considerably larger than the ones usually intended for combination with the several

in such fashion that it could be pushed up and down the barrel until adjusted. The Series II Velostigmat was mounted in the end of the tube, in a threaded ferrule for accurate focusing and the outfit was completed by painting the inside a dead black and cementing a leather-cover on the outside. The drawing herewith indicates the construction. This objective renders an excellent image, variable for magnifications from five to eight times by changing the distance between the two lenses and focusing with the camera rack-and-pinion. The camera-extension was ten inches and no further bellows-draw was required. On account of the great focal length, focusing is done more readily at the front lens-mount.

There are on the market a number of well-corrected negative lenses set in rack-and-pinion mount ready for use with standard photographic objectives, and their cost is not great, considering the range of usefulness they possess.



THE HOUSE OF THE SUNKEN GARDENS

EDWARD LEE HARRISON

Should the photographer wish to adjust his own instrument, any of the well-known optical firms will gladly grind a negative lens, sufficiently well corrected for the purpose, at a moderate cost. In general this lens should be not more than half the equivalent focal length of the positive lens, as the aberrations are more easily controlled for the shorter negative proportion.

The camera should possess an exceptionally rigid front and the tripod should be of an extra-heavy type for this class of work, as the exposures increase as the square of the magnification, and if filters and small stops are employed, the exposure may be—on difficult subjects, at high magnifications—as much as fifty seconds. The diaphragm-stops of the original lens-mounts are of no use, except for comparison; but the stopping down may be done with the original diaphragm, taking care not to stop below $F/110$ for the complete system. For an equivalent focal length of 35 inches, using a 7-inch positive lens, this would read $F/22$ on the original mount, and is extreme. If the lens is sufficiently corrected, $F/11$ or $F/16$ would probably be a better stop to use, and would save a long exposure.

A ray-filter should be employed for all except the most brilliant subjects, especially if the atmosphere is hazy. There is nothing like a light ray-filter to cut through haze. Subjects which can hardly be seen sufficiently well to focus on the focusing-screen can be rendered with amazing

clearness by the proper use of a ray-filter and orthochromatic film or plate. And if good contrast in a very hazy landscape is desired, a Wratten "G" filter, which will increase the exposure from 80 to 100 times, may be used to advantage. Lastly, a lens-hood should be used in virtually all cases to shade the front lens from sky-reflections. This much-neglected detail will do more toward obtaining brilliant telephoto-negatives than any single precaution. The one used by the author is made of flexible leather, and is—together with the ray-screens, wire-release, pinhole-lens, and extra films—easily carried in the side pockets of the Graflex. There are many ways in which the magnification and great focal length of the telephoto-lens may be used advantageously, such as when attempting portraiture in a cramped studio, in science- and nature-photography, mountain- and marine-views and photographs of celestial bodies; but the writer prefers to regard the instrument as a useful accessory to the rest of his outfit; and values it chiefly for its improved perspective and visual planes, and its adaptability to all kinds of architectural and engineering detail-work.

Probably, the first incentive toward the improvement of the telephoto-lens arose out of the requirements of astronomical photography. Dallmeyer exhibited some work at the London Camera Club that he made with instruments of this class that he had invented, in the early days



A CHARMING ENTRANCE

EDWARD LEE HARRISON

of photography. Moreover, he had devised several instruments for the observatory at Greenwich. As an example of what can be accomplished with a telephoto-objective of high power we may cite the photograph of Mont Blanc, made from Geneva, forty-four miles distant, by Boissonas. This historic photograph was made with a telephotographic combination of twenty-five feet equivalent focal length and was 20 x 16 inches in size. Compared to this, a picture made under the same conditions, with an ordinary lens of 7½-inch focus would be ½-inch wide. This photograph was awarded the Royal Society Medal in 1892. Some workers are of opinion that the results of the telephoto can be duplicated by straight enlargement; but a few moments' reflection will dispel this idea. In the first place, the grain of the film and the diffusion naturally resulting from projection, set a limit on the direct enlarging-process. The enlargement that results from the negative dispersion of the supplementary telephoto-lens, is an enlargement of the aerial image, having no granular structure and hence no diffusion; and, consequently, with well-corrected lenses, the results are virtually equal to the original image. Within certain limits, the single combinations of convertible lenses will answer for telephoto-work with small cameras that have double bellows extensions. For cameras of ordinary extension, another form of telephoto-lens of fixed magnification is available. This is known as the Gali-

lean telescope-type and its focus is usually about twice the required bellows-draw. This objective consists of an achromatic positive lens with a low-power corrective negative lens mounted in the same barrel and requires no further attachments to form the image.

There is another form of telephoto-lens of fixed magnification usually about double the focus of its required draw of bellows, but its field of usefulness is limited. This is known as the Kepler Telescope type, and consists of two positive lenses, the smaller magnifying the image thrown by the larger. To this type belong the Cooke-Telar, Dallmeyer Adon, Busch Bis-Telar, and the Ross Telecentric; all factory-adjusted lenses, and not manufactured in this country. These are not really telephoto-lenses in the true sense, and their construction and formulæ will not be taken up in this article.

On the whole, the special photographic field of the telephoto-lens lies in architectural and structural engineering-work. Many valuable architectural details can be obtained by the tourist who turns the inquisitive eye of his instrument toward the carved panels and sculptured cornices of the masterpieces of the builder's art. The practical value of the telephoto-lens to the professional designer and structural engineer is unquestioned. Details of steel bridge-work, skyscraper-framing, and other construction-work can be obtained from strategic points, and are very useful. It is certainly a source of satisfac-

tion to be able to take up a stand at an advantageous point, and obtain successively a general view, a detail-view, and a close-up of some particularly interesting bit, without changing the position of the camera.

The important point about telephotography is to understand its limitations as well as its range of usefulness. No photographer who has once learned to avail himself of the manifold advantages of the telephoto-equipment will be content to be without it. He will bring a new photographic world within the reach of his camera.

Not so long ago we stood gazing wistfully at a beautiful suburban residence—seen in a distant prospect through the bars of a substantial iron-fence behind which raged a bull-dog of fearsome proportions and savage mien. What, in such a case, can exceed the satisfaction we felt, as we set up the tripod just beyond his angry reach, adjusted our telephoto-objective and calmly obtained the coveted picture; the while addressing appropriate and derisive remarks to our fiery adversary? Truly, science is wondrously convenient at times!

The True Functions of Photography

CHARLES MARRIOTT



EAMS have been written about the true function of photography, but it seems to me that most of them are unnecessary if we think about the things that photography is done with. The best guide to conduct in any department of life is a consideration of the tools and materials. The matter is complicated, of course, when the nature of the tools and materials is not very clearly defined or not very completely understood, but the principle remains; and if we had a clear understanding of human nature, we should have an infallible guide to conduct in all human affairs.

The tools and materials of the photographer are light and the sensitive salts of silver. Strictly speaking, the whole art of photography, with all its possible functions and all the possible aesthetic rules that may be deduced from its practice and all the hopes of its future perfection, is contained in its name—photography, “describing with light.”

The universal glance of light, exquisitely subtle in its degrees of intensity and duration, and the perfect and immediate response of the sensitive salts of silver, carry with them a certain consequence. It is that in all that concerns the actual production of the picture a photograph really takes itself.

We have only to glance at the tools and materials used in the other pictorial arts to see that photography does not resemble any of them. In all of those the picture is actually the creation of the human hand, whatever other organs or faculties are involved in its making.

In our discussions of the rights and wrongs, the merits and defects, of photography as compared with the other arts, we are apt to lose sight of this cardinal and simple fact. The other arts are all done with the hand; whereas in photography the hand is only concerned in preparing and controlling the conditions in which the picture takes itself.

Do not think that I am belittling the technical processes of the photographer. These are supremely important, and they constitute an education in themselves, and for their proper fulfilment they demand a wide range of human faculties. But what I would point out and emphasize is that they have nothing to do with the actual production of the picture. That results from the mystical union of light and the sensitive salts of silver.

The photographer presides over that union, but only as a farmer may be said to preside over the union of the beasts he breeds from. He can choose the parents, and he can rear the offspring; but he has nothing whatever to do with the fact of conception; and any attempted interference with it is likely to have as prejudicial effects in the one case as in the other.

It follows that photography is absolutely a law to itself. None of the rules and standards that are legitimately derived from the practice of those arts that are done with the hand has any direct bearing upon photography. Even the principles of pictorial composition have to be modified before they can be applied to it effectively; because detail, which is a hindrance to drawing and painting, presents no difficulty to



SPRING

E. M. PRATT

the camera; and composition which does not take advantage of the full capacities of the medium to which it is applied is a sterile exercise.

With a correct use of the means at their disposal, photographers still cling to the æsthetic standards of painting—which is produced by entirely different means. I doubt that there are any æsthetic rules or standards that are valid beyond the medium in which they originated. Examine them carefully, and you will find that they are based upon some necessity of that medium. Thus, breadth is a virtue in painting, mainly because it is only when paint is broadly handled that you display its full beauties of color and surface; it is a virtue in photography, only in so far as it enables the picture to be seen without distraction.

What I am pleading for, you see, is the final and complete emancipation of photography from

the tyranny of all or any of the other arts. I want photography to be practised as if painting did not exist. It is, I know, extremely difficult in practising one art to rid your mind of considerations connected with another art that resembles it superficially; but the only way to perfection is to do things on our own lines. The resemblance between painting and photography is purely incidental; both are concerned in making pictures, but since the means employed are entirely different, there is not the least reason why the pictures should be the same in kind.

I would not go so far as to say that the photographer ought never to look at paintings, because I do not believe in prohibitions of any kind; but he ought to look at paintings for their own sakes, and not because they have anything to teach him about his own art except by contraries.

One of the things which struck me forcibly in

looking at your exhibition was the extreme diversity of effects possible to photography. First of all, there are the effects connected with the swiftness of light and the delicacy of its revelations in passing. Whether as regards a turn of the weather, or a fleeting human expression, the painter can do no more than suggest the passing moment; but the photographer can actually capture the moment as it flies, alike in landscape and in portraiture. We are accustomed to say that the advantage of painting is that it enables the artist to convey the persistent, as distinct from the momentary, character of the subject. This is true; but it is also true that the photographer has an advantage in the other direction. Often the real person only comes out in a flash, in conversation or in response to a glance: and this flash the painter can reproduce only from memory, whereas the photographer can catch it at the very moment.

Then there is that immense range of effects dependent upon the subtlety of gradation in tone. There is something in the infinitesimal degrees with which light creeps over a smooth, rounded surface, which gives great pleasure to the senses; and this is an effect that presents no difficulty to the photographer. It is, incident-

ally, an artistic justification of the nude in photography.

Then there is the great question of detail. Obviously, the brush is ill-adapted to the reproduction of very fine detail, as of trees against the sky; and, as a rule, the painter is content with suggesting the effect. But there can be no doubt that there is an artistic interest in this very fine detail itself, and it is within easy range of photography.

I have not been trying to make out that painters ought not to deal with the same subjects. There is nothing in the whole world that cannot be stated in terms of your particular art, whatever it may be. All that I mean is that the terms differ with the art: that certain aspects of subjects are better adapted to the one art, and certain other aspects to the other.

A great many of the characteristics that are quite properly looked upon as virtues in painting are, in reality, due to almost insuperable difficulties with the tools and materials. They are virtues of necessity. In photography, the same necessity no longer exists, and therefore they cease to be virtues. They may even become vices.—*Paper read by Mr. Marriott before the Camera Club, London.*

The Lure of Spring



THE photographic publisher may not arrogate to himself the right to speak in terms of familiarity on the subject of photography. The "special writer," when he is sure of his ground, has often to his credit admirable opinions on the practice of photography. The following paragraphs from the *Boston Traveler* are an intelligent invitation for the camera-user to sally forth at the opening of the spring-season.

"These spring-days seem to stir the pulses of the camera-owner. Every bright day beckons to him irresistibly to come forth and see what nature has to offer freely—his for the taking. The short days of winter, when the sun's rays are aslant and cold, have little allurements for the photographer. For an occasional snow-scene of rare beauty, he may bring forth his outfit and make a few exposures. But for the most part, the camera is allowed to hibernate.

"Now, the camera refuses to stay within doors. It does everything but walk out on its own tripod.

It is eager to be searching out scenes of beauty, episodes of interest. From the simple little snap-boxes to the elaborate focusing-instruments, with their fine lenses and wonderful shutters, the range of instruments is wide enough to suit the whim or fancy of every individual. The degree of success obtainable does not seem to depend so much upon the instrument used as upon the skill and taste of the operator.

"Photography, as a pastime, may become exacting in time or money, or it may be kept within bounds. The further one goes in studying and experimenting, the more one discovers that he doesn't know much about it. And yet, for those who like it, there is an abundant source of pleasure in making pictures, in developing the exposed plates, and preparing the finished prints. And then, for every success there is the reward of a permanent record of scenes and situations that have afforded pleasure at the moment and will continue to afford pleasure as often as the album of souvenirs is thumbed over."

Exposure-Guides and Experience

WILFRED A. FRENCH, Ph.D.

SEVERAL correspondents have written to the Editor expressing much satisfaction in reading some of his personal experiences during the early days of amateur photography, adding that many of them admirably fit modern conditions. That is exactly the reason they are narrated in PHOTO-ERA, for they will be found applicable to present-day activities.

In this connection, he recalls an incident that still hits the tripod-camerist who relies for correct exposures solely upon a complicated guide in the form of a book which he affectionately terms his "vade mecum." There are many Boston amateurs still living who will remember the veteran photographer, John W. Black, active until the time of his death—thirty years ago.

It was one Sunday forenoon, in the eighties, that about a dozen active members of the Boston Camera Club were scattered along Washington Street, not far from the Transcript Building. They were surveying the Old South Church, corner of Milk Street, preparatory to making careful pictures of that historic edifice. There was no street-traffic of any kind, at the time, so that the camerists found no obstacles in placing their camera-bearing tripods wherever they pleased—on the sidewalk or in the middle of the street. Much time was spent in placing and studying the image on the groundglass. Mr. Black happened to arrive on the scene at about ten o'clock. His object was to visit his studio, which was nearby, in order to remove several batches of prints which had been allowed to rinse all night. He stopped long enough to see what the amateur photographers were doing, then disappeared through the door leading to his studio. The men from the camera-club were glancing, now and then, at the object of their photographic interest; adjusting their cameras; looking at the sun; examining the image on the groundglass, and, most of all, studying carefully their various exposure-meters and guides. The question uppermost in their minds seemed to be, "How much time must I allow for this exposure?" They fussed and calculated, refussed and recalculated, until it got to be nearly 11.30, when Mr. Black emerged from the door of his building. Approaching the most industrious of the embryo artists, he said, "What's the matter? You seem more interested in studying, than making pictures." Book in one hand and pencil in the other, the owner of the camera replied: "I am trying to figure out how much time to

give this picture. You see, I've got to get the F-value of the stop I am going to use, and I forgot to mark it (he was using the now obsolete, loose waterhouse-diaphragms). I am not quite sure of the equivalent focus of my lens, and the plate I'm using isn't listed among the plate-speeds of my exposure-guide. I'm all right on my light-values, time of day, and season of year. Of course, when I first came, the illumination on the church was just right; now, the sun has swung around and the light-effect is different. My calculations don't fit. I've got to change my figures and—" "Oh, Fiddlesticks!" snapped Mr. Black, at the same time approaching the young man's camera. With an impatient movement he put his head under the focusing-cloth, briefly examined the groundglass-image and asked what brand of plates was being used. "Carbutt B," responded the camerist, who recognized in Mr. Black a photographer of sound, practical knowledge. "All right, give her five seconds." "But, but," queried the astonished amateur, "how do you know that's the proper length of exposure?" "Common sense and experience," answered the expert. "If you would discard that book with its complicated tables and formulas; remember next time under what conditions you made your last exposure; do a little mental arithmetic, and make a good guess as to the amount of time you would need, you would come mighty near being correct. Supposing, for instance, you made up your mind that six seconds was about right, and you gave one second, more or less, you could adjust your development accordingly." "That's so," assented the camerist, who, oscillating a 9 $\frac{3}{4}$ -inch pocket-pendulum—which, he said, had come from Mr. Wilfred French—gave the required five seconds' exposure. "But what puzzles me most," he continued, "is that you don't know anything about the focal length of my lens, nor the size of stop I am using, and yet you determine the correct time by merely looking on the groundglass." "Exactly so"; obligingly explained Mr. Black, "it's the degree of brilliancy of the image produced by the lens, regardless of whatever the conditions may be—character of object, light or lens, focal length, size of stop—that determines the amount of exposure to be given. Of course, the character and degree of sensitiveness of the plate in hand must also be considered. There are three makes of plates on the market now, and their character and behavior are pretty well known. In my studio I use Seed 26 and, for



MOTHER-BROOK, IN 1880

WILFRED A. FRENCH

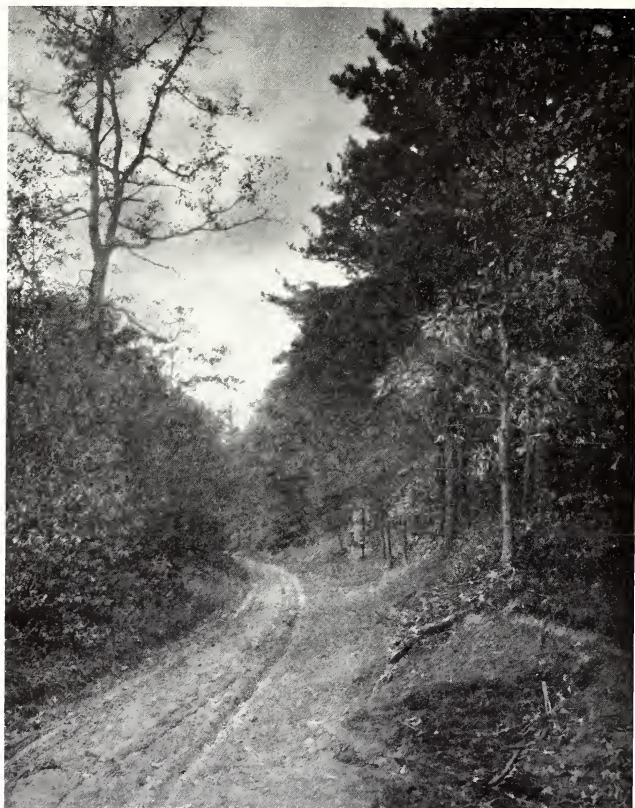
my view-work, Carbutt B. My advice may not be scientific, but it's based on practice and works very satisfactory."

Our amateur's only exposed plate of the Old South Church (Carbutt B plate, $6\frac{1}{2} \times 8\frac{1}{2}$ Ross Rap, Sym. lens, five seconds at $F/22$) proved to be the best negative made on that rather checkered field-day. As he could not be expected to acquire Mr. Black's practical experience in a few days, he did the nearest thing and discarded the book-form of exposure-guide in favor of a simplified and convenient one, in the shape of a thin, flat disk, invented by Hoover, a Rochester photographer. Similar devices—and inexpensive ones, too—are much in favor at the present time, such as the excellent Burt and the Harvey exposure-meters, as well as the new and ingenious Relio Exposure-Scale. They have been tested by the Editor and found to be quickly available and accurate, and much superior to any time-consuming guide in book-form.

The reader will understand, of course, that in most roll-film cameras no provision is made for a visible reflected image, except the one in the view-finder; yet this miniature image is utilized

by experienced workers to determine the correct exposure. This refers, particularly, to the old-model box-finder, and not to the direct-vision nor to the brilliant type of finder. There are, however, several types of folding and reflecting-cameras which are adapted to the use of film-packs and dryplates. Having a groundglass focusing-screen, they enable the camerist to study the image, compose the picture and, by estimating the degree of illumination of the image, to determine the length of exposure.

The watch-form of exposure-meter, or actinometer, has obvious advantages; but unless the required tinting-paper is uniform in color and sensitiveness, the actinometer is of no use. As the tinting-medium consists of a specially sensitized paper, it deteriorates in time, and, if exposed to the influences of heat, moisture or contaminating chemicals at the photo-dealer's or, worst of all, at the drug-store, it is clear that the user must choose carefully his source of supply. Furthermore, to ensure success with the use of any timing-device, the camerist must be a good judge of the character of the object to be photographed, and of conditions of color, light and sky.



THE CURVING WOOD-ROAD
FREDERICK B. HODGES



The Curving Wood-Road.

Alzuma Whittemore Hodges.

The city-road, the country-road,
The road beside the sea,
But the road that leads one through the woods
Is the road of roads for me.

The rainy road, the sunny road,
The road of sunset-fire,
But the winding road through forests dark
Is the road of heart's desire.

The winding road, the curving road,
The road I dearly prize,
With every bend some vision new
Delights my wondering eyes.

The autumn-road, the winter-road,
The road of springtime-bloom,
But the woodland road in summertime
Sets all my heart in tune.

So all roads are good roads,
Each road has beauties rare,
But the curving summer wood-road
Is the road beyond compare.



EARLY MORNING

RAYMOND E. HANSON

A Provincetown Pilgrimage

RAYMOND E. HANSON AND HERBERT B. TURNER



ILFRED A. FRENCH is responsible for this pilgrimage to Provincetown. One evening, last October, he suggested to Mr. Turner that a photographic interpretation be made of the approaching tercentenary of the Landing of the Pilgrims, November 21, 1920, at Provincetown, Massachusetts.

Mr. Turner was selected, we presume, because he is a descendant of nine of the Mayflower passengers; is connected with the Massachusetts Society of Mayflower Descendants and, naturally enough, is interested in the early history of New England. The suggestion was received by him without enthusiasm at the moment. Later, he tried to pass the undertaking on to Mr. Hanson. The outcome of it was that we, jointly, decided to make the attempt, and we motored down to do what we could to make a picture-record—winter weather and all.

The equipment chosen was as follows: Mr. Hanson used a $3\frac{1}{4} \times 4\frac{1}{4}$ Graflex, equipped with a $6\frac{1}{2}$ -inch Smith soft-focus lens, and a 3A Special Kodak with a II B. Bausch & Lomb Tessar of 7-inch focus and Mr. Turner selected a 4×5 Speed Graphic, I. C. Zeiss Tessar and a 5×7 Revolving-Back Cycle Graphic with a 12-

inch Smith and a 9-inch Protar. Mr. Hanson used Standard Orthonon Plates in the Graflex and roll-films in the Kodak. Mr. Turner used Wratten Panchromatic Plates and film-pack for the larger camera and Standard Plates and film-packs for the other. An Ansco Speedex with a Goerz Dagor was carried along to be used if a long focal length should be required. Tripods, exposure-meters and various filters were added, including a Wratten G filter (red); for Mr. Turner had an idea that it might help to cut out mist. Whether it would or not, we did not have an opportunity to learn, as the weather—contrary to our expectation—was generally fair and free of fog and mist.

That band of the Puritans, known to us as the Pilgrims, landed on the New England coast, for the first time, on the tip end of Cape Cod, where now stands the historic town of Provincetown. The date of this landing was November 21, 1620 (new time) or November 11, 1920 (old time). Therefore, in order to be on the scene some two hundred and ninety-nine years later it was necessary for us to be in Provincetown Friday, November 21, 1919.

We left Boston by automobile, Thursday morning, at 8.30 A.M. The day was clear and

cold. The night before, snow—the first of the season—had fallen, and this made the roads slippery as it began to melt and form puddles.

The road through Hanover was chosen as being the shorter route. We traveled over the long winding highway at a moderate pace through rural sections, all bare of foliage, grim and brown, through long stretches of monotonous second-growth woods and on to Plymouth of historic memory. Here we noted, in passing, the old burial ground of the Pilgrims; the monu-

Passing through Sandwich and traveling in a generally easterly direction—making Barnstable en route—we arrive at Orleans, where the road bends sharply due north and so continues on through Wellfleet and Truro to Provincetown. On the left of the highway, in Wellfleet, a picturesque old windmill of Dutch type greets the eye. It stands solemnly by the roadside, eloquent of by-gone days on Cape Cod. Its wings are still, stripped bare of sail, and we guessed that its days of toil were over, many years ago.



WATERFRONT-SCENE

HERBERT B. TURNER

ment rising aloft over the town; and the rock on which the Pilgrims first stepped—still intact, and guarded jealously by iron-railings against the attacks of souvenir-hunters.

From Plymouth on, the country is more diversified and much of interest to the pictorialist appears at every turn of the road. For some distance the highway, of smooth macadam, skirts the seacoast and then tends inward over hill and dale. Occasional glimpses of the tumbling billows of the blue Atlantic seen in the distance may be obtained from many points of vantage. Old houses of typical Cape Cod variety—small, compact, with great square chimneys, suggestive of the huge hearths within—make their appearance and are a prominent pictorial feature throughout the journey.

The country now assumes a more rolling character. Successions of low hills confronted us, up and down and around which the road winds, with vistas here and there of great distances. On a bluff, at the left, are seen two ancient structures—one an old-time church, the other the townhall of Wellfleet. On the very brink they stand, silhouetted against the sky, dwindled to the size of toy-houses by the distance. Villages and small hamlets are dotted, here and there, over the country-side and, as we passed through them, all seemed to be very quiet and slumbersome; the inhabitants, save for one or two about the general store, were for the most part invisible. We wondered where they were, and what they were about. A great, peaceful tract of country this, unhurried, at rest,

drowning under the late November sun. At last, upon mounting a low hill and rounding a bend, a grand panorama came into view, the graceful curve of the cape stretched before us—the waves breaking on the yellow sands of the beach along its entire length—and in the extreme distance, the clustered houses and shacks of Provincetown, with the Pilgrims' monument rising aloft from the low hill behind the old town. At the right of the road were the wind-

On our arrival, at this spot, the sun was low and there remained very little daylight to begin our photographic labors. However, a few exposures were made, as the mellow light and long shadows lent themselves well to pictorial effects.

Mr. Turner used a soft-focus lens at an aperture of F/9 with a K-2 filter, first with a panchromatic plate, then with a film, after which he employed a 13-inch combination of a Protar with



LIGHTER-RAILWAY

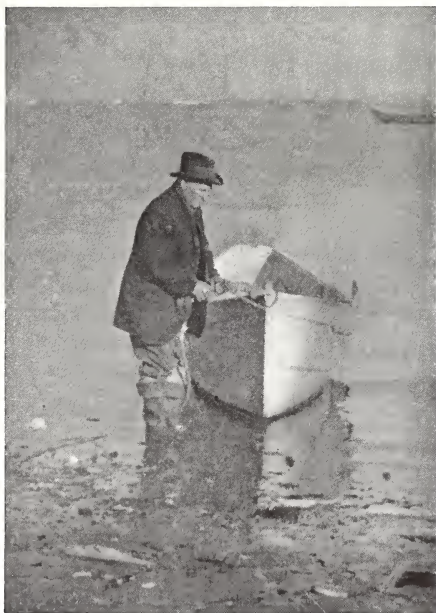
HERBERT B. TURNER

swept dunes of yellow sand that passed in great rolling billows off to the far reaches of the east.

We rapidly traversed the shore and approached the town, entering the outskirts at 2.45 P.M. A few minutes' ride, down the narrow main street, brought us to the northern extremity, where a tablet on the shore marks the first landing-place of the Pilgrims. It was a lonely stretch of sandy beach, extending to the very tip of the cape, windswept, cold and desolate at this season of the year. It could not have been one of the most cheerful aspects in 1620, when Miles Standish first trod these shores! Sand-dunes may be seen from the landing-place across the marshes to the east, and southwards a fine view of Provincetown can be obtained.

the same filter and a film. Mr. Hanson exposed two Orthonon plates, at F/8 with an 8-time filter and gave a half-second exposure. The subject was the town as seen from the beach, close to the Pilgrims' landing-place, and included some picturesque old trees in the left foreground. The panchromatic plate gave a more colorful rendering, but cut out more haze than was perhaps desirable.

Our next move was townwards in search of a hotel; we stopped at the New Central House, where we were well accommodated with heated rooms and good meals. It is a quaint and curious old town which has arisen on the far end of Cape Cod. One long, narrow street with an endless variety of old cape-houses, shacks, and



FISHERMAN
RAYMOND E. HANSON



LANDING-PLACE OF THE PILGRIMS

RAYMOND E. HANSON

stores on each side, runs the entire length. Numerous short, narrow streets, or we might say lanes, lead off at frequent intervals on the land-side; but on the shore-side, fish-wharves, stores, jumbles of shacks, barrels, lobster-pots, fish-seines, lumber-yards and shanties without number are crowded together promiscuously.

On a low hill in the center of the town, the Pilgrim monument of gray granite rises to a lofty height that commands the entire region. At the foot of the hill, in times past, was a small pond—long since disappeared—where the women-passengers of the "Mayflower" washed their clothes during their limited sojourn in Provincetown.

The town is pervaded with a strong atmosphere of antiquity, rich in suggestion of the olden days on Cape Cod, and past generations of Cape Cod folks. However, it is somewhat marred by a too liberal sprinkling of telephone-poles and electric lights. Portuguese fishermen in picturesque garb—rubber-boots, oil-skins or corduroy, dark, swarthy men—are seen on every side, in the street, on the wharves or chugging to sea in their motor-raft. The houses, although old, are well preserved, snug, and generally capable, we assumed, to protect their inmates from the biting cold and blustering winds that prevail here during the winter-months.

Inquiries as to the location of the famous spring, from which Miles Standish and his men

first slaked their thirst in New England, led to no little bewilderment on our part. Everyone told us a different story. We found one man who swore he drank from it twelve years ago. However, the general opinion seemed to be that the spring was marked by a three-inch iron-pipe on a hillside, off the salt-marshes back of Pilgrim Heights.

With this information, we set out early the next morning—the historic November 21—in an attempt to find the elusive spring. We drove some four miles to the heights, crossed them and went down on the other side towards the sea. Here we found it necessary to leave the car and to proceed on foot. This we did, and we were heavily laden with cameras and tripods. The sun shone brilliantly out of a clear sky, melting the snow, which glistened in scattered patches over the broad expanse of russet-hued salt-marshes. We skirted three low, sandy hills, for a mile or more as directed, and got our feet wet; but could find neither the iron-pipe nor any sign of a spring. (Iron-pipe of three-inch dimension is no easy mark to hit upon in some hundred acres of marsh-lands!) But, perhaps, some of the summer-visitors, this year, may be more fortunate than we were. However, not to come home empty-handed, we exposed several plates on some very picturesque material, which consisted of a suggestion of old cart-road on the meadows and a fine grouping of willows, close to



THE TOWN FROM LANDING-PLACE

HERBERT B. TURNER

the spot where the spring is reported to be. Both of us used, in this instance, the soft-focus Smith lens. Mr. Turner used both film and panchromatic plates, the latter yielding the better negative of the two.

From this hike, we could gain some conception of the appearance of the land when valiant Miles and his sturdy men—armor, homespun, top-boots, matchlocks and all—marched about among these same hills and frozen bogs in 1620. In primeval state a savage wilderness of low, rolling, wooded hills, sandy wastes, marshy jungles, and intricate dark forests, inhabited by ferocious wolves, dangerous bears, timid deer, wild-cats, ducks, geese, partridge, turkeys and, most fearful of all, the wild Red Men. The latter lived by hunting and fishing; his pet diversion was the war-path—wild foray against the outlying villages of his enemies. Many are the unchronicled combats fought in the dark depths of these forests in whose secluded aisles resounded the fierce war-cries and furious shouts of the maddened warriors—long centuries before the pale faces came, to conquer, subdue and civilize.

Agriculture—could it be so called—the Indian did practice, after a fashion. In the clear spaces, open to the sun, the squaws turned up the soil

with crude iron- or bone-implements, and sowed their meager stores of beans and maize during the hot summer-months. However, the warrior disdained such lowly occupation. Taciturn and haughty, his energies were spent in the more manly occupations of the chase or the more hazardous enterprise of war. The Indian habitation was the wigwam of bark and skins, erected in the depths of the forest—sheltered as best it could be from the rigors of the climate. Here, during the long winter-days, the Indian brave would lie in slothful idleness, huddled near the hissing and sputtering fire of pine-knots which the squaws gathered, his eyes, no doubt, red and watery from the stuffy atmosphere of his smoky wigwam.

A land of mystery, of strange noises in the night; a bleak, cold land of frigid arctic blasts from off the open sea in winter; a warm, humid land of fragrant pines and aromatic shrubs, teeming with wild life in the summer months. And to this inhospitable shore in 1620 came the Pilgrims. Cape Cod, a huge arm flung to seaward; its great elbow bent,—where stands the present town of Orleans; its giant fist—the present site of Provincetown—half open, into whose iron-clasp the Pilgrims eagerly sought refuge from their two months of storm and

terror in the stuffy cabin of the *Mayflower*. Having dropped anchor in the harbor, the Pilgrims began at once to explore the shores where fate and the contrary winds had blown them.

Miles Standish and some fifteen of the more venturesome men rowed ashore in the ship's boat on the morning of November 21—driving in on the low, sandy beach where the tablet now stands on the extreme northern edge of the town. We may assume that it was a cold, bleak morning, with snow in the woods and a sprinkling, here and there, over the dunes. This handful of men, alone amid the unknown terrors of a new world, set out, along the beach, at first, in quest of a suitable place to establish a settlement. They had proceeded but a short way, when they discovered in the distance five or six Indians and a dog. The Indians discovered them at about the same time and took to their heels at once, mightily astonished, no doubt, by these strange apparitions. The Pilgrims, with Captain Standish in the lead, set out briskly in pursuit; but weighted down as they were with their armor, heavy boots and muskets, they were no match in speed for the scantily clothed savages. Seeing that they could not come up with the latter, and that night was setting in, the leader called a halt, and his small party camped in the sands for the night. They built a roaring fire of pine-logs around which they slept as best they could.

The following morning, at daybreak, they resumed the trail of the Indians. However, at the end of some hours, the trail was lost and the Pilgrim Fathers "falling into shuck thickets as were ready to tear their clothes and armor in pieces," as Bradford so aptly words it, found themselves at a loss in which direction to proceed. They were much distressed for water, and forthwith began a search for some spring or brook. After much thrashing about in the frozen bogs and thickets, they finally extricated themselves, and in a short time of diligent search hit upon a spring from which they drank their fill. This was the first water in New England of which they drank, and is now marked by an iron-pipe—some "three-inch pipe on a hillside somewhere off the marshes," we are told.

The next venture was to cross the cape, which they did without mishap. And it was on this trip that they found the pond of fresh water and the Indians' stores of corn and beans, which they dug up and appropriated to their own use. Having discovered what they could, they now returned to the ship amid general thanksgiving, and related their adventures in the drear, bleak land they had traversed. The shallop, brought

over from England in the *Mayflower*, was now, thanks to the diligence of the carpenters, ready for sea. After a brief rest, Captain Standish embarked in the little craft and once more set out to learn more of these gloomy shores. The Pilgrims beat around the cape to the shore they had discovered on their first expedition; but found that the harbor was not to their liking. However, they landed, to look about. Tramping inland upon the low wooded hills, they stumbled onto two Indian wigwams with mats and "sundry of their implements," and more corn and beans, which they took, "proposing to give them (the Indians) full satisfaction when they should meet with any of them, as about some six months afterward they did, to their good content." (Bradford.)

The ground was now all covered with snow and frozen hard, and they hastened to return, it being high time to effect a permanent landing and prepare a settlement against the rigors of almost arctic winter which was coming upon them.

Accordingly on December 16 they embarked once more aboard the shallop and set out to circumnavigate the bay. It was intensely cold, and snow-blizzards threatening from the dull gloomy clouds which obscured the sun, and made more dreary the vast solitude of these old New England coasts. The spray, that came aboard as the shallop plowed the choppy sea, froze on the men's coats, and covered the rigging with ice—no pleasant sailing, this! That night getting "downe into ye botome of ye bay as they drue nere ye shore, they saw some ten or twelve Indians very busie aboute something." (Cutting up a fish, as it afterwards proved.) They came ashore, and landed some distance from the Indians. Another night had settled over the forests, black, cheerless and threatening. A barricade of logs was erected; a great fire was lighted and it crackled there amid the gloom of the dark woods, throwing its fitful, ruddy light upon the none too cheerful faces of this isolated little band of adventurers. Far down the shore gleaming yellow out into the night, they could see the camp-fire of the Indians. Huddled around the blaze, sheltering themselves as best they could from the violent gusts of brisk salt-winds from the sea, the Pilgrims awaited the dawn. At last when it arrived, they set out once more on their travels, some by land and the remainder by sea in the shallop. This day, the land-party tramped through the forests without incident worthy of note. At nightfall, they left the wood and came out upon the shore where, seeing the shallop hard off the coast, they signaled her to put in to a nearby creek. When



THE PILGRIM SPRING

RAYMOND E. HANSON

this was accomplished, the camp was made, a barricade thrown up as on the preceding night. Near twelve o'clock, an alarm was sounded by the sentinel. Frightful yells resounded from the black depths of the forest. The camp sprang to arms, a couple of matchlocks roared with loud detonation that split the ear of night and effectually silenced the Indian yells in the wood. The quiet of the wilderness was again unbroken save for the sighing of the wind through the pines. At five the next morning, following prayers and breakfast, they were preparing to depart, when the alarm was again given, the sentinel rushing in with a cry of "The Indians!" Once more the woods rang with the fierce war-cry of the Red Man, but with added vigor, and accompanied by the flight of feathered arrows into the camp. Then followed a hot tumult for several minutes, with much exploding of gunpowder, roaring of guns and twanging of bow-strings. One attack the Indians did essay against a party of defenders who ran to the boat for their armor and muskets;

but they could accomplish nothing, being driven off in hot haste with cutlass and musket-ball. The hurly-burly ceased as suddenly as it began, the Indians skulking off into the depths of the forest. The strange thunder turned loose by the white men was little to their liking and far beyond their comprehension. Save for the white powder smoke drifting up into the frosty air, nothing remained as a reminder of the scrimmage. Neither white man nor Red Man was hit—bad marksmanship all around!

Much elated at their easy victory, the Pilgrims got their little band safely embarked again in the shallop, determined from here on to proceed by sea. After much buffeting, breaking of their rudder, and steering with difficulty with two oars, they arrived storm-tossed and weary in what is now Plymouth Harbor. They landed in drenching rain, and not without difficulty, on what is now known as Clark's Island. Somehow or other, they managed to light a smoky fire with the soaked wood, and spent a most wretched



PANORAMA

RAYMOND E. HANSON

night. The rain continued until near morning, when the wind changed to the northwest and it came off cold and froze. During the forenoon, they succeeded in effecting a landing on the mainland. They explored hereabouts and decided that this place was a suitable site to settle (December 21, 1620). The shallop then returned to the ship which set sail and put in here at Plymouth on the 26th of December and let go her anchors.

Such, briefly, is the history of the Pilgrims' first travels on Cape Cod. Here we must leave them, amid the protracted cold of the long winter of these latitudes and the stirring dangers lurking in the trackless forest; to build their rude log-cabins and to begin their settlement as best they can; to hunt the turkey and deer for meat; to gather the bayberries—abundant along the coast—for candle-making to light their log-huts on the long, cold evenings, and, in general, to prepare for the bringing of civilization to a savage land—pioneers of freedom, at liberty to worship God after their own fashion and unhindered by the tyranny of earthly Kings.

To return from this digression. Having failed to locate the "three-inch iron-pipe" that marked the spring, we returned to Provincetown and roamed about the water-front and side streets, making many pictures of characteristic bits, here and there. From the hill, where the monument stands, we obtained several panoramas of the town below. Much picturesque material is to be had in Provincetown; but for wharf-scenes and marine-views of this type, it does not seem to us to compare favorably with the wealth of pictures to be found on the water-front of Gloucester on Cape Ann.

The town by night is lighted by electric lights, from end to end. Most of the shops are dark, and the streets for the most part deserted at this season of the year. A motion-picture theater blazens its attractions to the passerby with the usual glaring billboards.

On the morning of the 22d we left Provincetown, after making a few last exposures, and got ourselves in motion again southwards. Some two miles out, we stopped for an hour or so to search for picture material among the great waste of sand-dunes before men-



STREET-SCENES
RAYMOND E. HANSON



OLD HOUSE, DUXBURY

RAYMOND E. HANSON

tioned. The light was poor and gray clouds obscured the sun; but the dunes were very interesting with their graceful contours, and lonely spirit which seems to brood sadly over these vast solitudes.

Our next stop was in Truro, where upon inquiry at the village postoffice we were directed to Corn Hill, some distance towards the sea on our right. We saw where the corn was said to have been found; but little in this vicinity appeared of particular interest, and we continued our journey. Passing through Wellfleet we found the old windmill in that town well worth a few exposures, made in the same gray November light which had confronted us earlier in the day among the sand-dunes.

Well on towards noon, we arrived in the tiny village of Orleans. The hotel was closed and no luncheon was to be obtained, so that recourse was had to the grocery-store where, on crackers and cheese, washed down with ginger-ale, we had a most frugal repast.

Taking the road to the left from Orleans, about an hour's drive brought us out upon the south shore of the main arm of the Cape at Chatham, famous as a summer-resort but, at

this season of the year, deserted and lonely. The long reach of beaches with closed cottages seemed to brood over the past summer-gaieties.

On the outskirts of Hyannis, an hour's journey further along, stands the oldest windmill on Cape Cod. A sign of huge dimension—for the convenience of photographers, no doubt—stands conspicuously before the mill. So craftily is it placed, that to compose a picture here is well nigh impossible. We maneuvered around this obstruction in every direction and did what we could to picture the old mill. It was a venerable mill,—gristmill, to be exact—ruddy and weather-beaten, vine-covered now, with sails removed. It was known to be at least two hundred and fifty years old as a nearby house-painter informed us. What memories of the past might it not reveal, could its old ruddy-hued hulk suddenly come to speech! In its day it was transported from one town to another on the cape—to Sandwich for one—and at last it was brought here to the plains of Hyannis—come to rest finally, its work done for all time. Mightily it labored in those old days, in stolid Dutch manner, with all sails set against the brisk ocean-breezes, grinding the corn-harvests for generations of



OLD WINDMILL, HYANNIS

HERBERT B. TURNER

Cape Cod folks. We were told that it could be used even now, were its services required. Its sinews are still stout and in working order—a staunch old patriarch and a credit to its builders.

Outside of Hyannis, we took the road to the north and crossed the cape to Barnstable on our return-trip to Boston. By four o'clock we were again in the historic town of Plymouth, and as night was coming on cold and bleak, and Boston still about forty-eight miles away, by the nearest route, we decided to lay over here until morning.

Sunday morning was fair and sunny. We set out for Boston by way of Duxbury and Scituate. In the former town we saw the famous monument to Miles Standish, visible for miles around—a permanent landmark and memorial to the doughty warrior of the Pilgrims, who made his home in this town, some time after the settle-

ment at Plymouth. Just off the highway, in Duxbury, we came upon a very picturesque rural scene—an old country-road with a rustic, cabin-like house on one side and woods on the other, all flooded with morning-sunshine. We photographed the scene, using an 8-time filter, a half-second exposure at aperture F/8 with the Smith lens.

Along the shore, in Duxbury, it is delightful. Fine summer-estates, and diversified coastline, accompanied by the quaintness of old New England coast-towns, make it an ideal summer-resort. Arriving in North Scituate, we took the shore-road and spent some time driving about viewing the summer-colony here. After this, we returned to the main highway and proceeded on through Cohasset, North Cohasset and Hingham to Boston, where we arrived about 2 P.M. at the end of our journey.



SAND-DUNES

RAYMOND E. HANSON



EDITORIAL



Individuality in Business-Methods

PHOTO-ERA has been called by one of its friends, "The Magazine of Individuality." That it is not, what has been said of certain newspapers, the result of "paste-pot and shears," must be evident to any intelligent reader. The Editor's personality is discernible, for he takes a personal, practical interest in every item, large or small, that forms a part of the magazine. The editorials are all from his pen, and so are other departments and paragraphs. Of course, there is always a conscientious effort to have that individuality appear on the side of excellence; for inferiority in workmanship and arrangement, and faultiness in diction and orthography, may justly be regarded as evidence of incapacity, indifference or carelessness.

The endeavor to escape convention is what marks the successful merchant, purveyor or man of business who, instead of imitating the arts of his competitor, tries to be original. This desire for innovations is seen everywhere in the big cities—in the shop-windows, for instance. It is an art to arrange articles of merchandise attractively and temptingly, and a skilled window-dresser is a person who commands respect and a good salary. What an effect is produced by the appearance of the display-window of the photo-dealer, every observant camera-user knows. There is also the method of approach in the attempt to get new customers, and, naturally, in the manner adopted to hold old ones. There is much to be said, too, with regard to the kind of circulars and business-noticees sent out by the enterprising photo-finisher, and the manner in which he conducts his correspondence, particularly with reference to answering replies to advertisements. All depends upon the impression he makes on strangers. Here, promptness and clarity, courtesy and brevity, will be found matters of the highest importance. All the same, this method of getting business may admit of improvement upon what the other fellow has been doing—with more or less success. One particular, on which all will agree, is that letterheads and certain enclosures shall be tasteful and simple, and suggest the artistic nature of the business of photo-finishing. The statement can be truthful and unique at the same time. If the photo-specialist happens to be a person of

artistic taste, and formerly a successful camerist, so much the better. He will find it not only valuable in the class of work he produces, but in his advertising. In the absence of such an asset, the enterprising dealer or specialist can obtain suitable suggestions from almost any of his artist-customers, in consideration of a suitable *quid pro quo*.

Public-Spirited Camera Clubs

THE suggestion that camera clubs constitute themselves as a means to help improve the appearance of the parks, squares and streets of their city, was first advocated by PHOTO-ERA, eight years ago, and mentioned many times since. It was shown how much, including the correction of official neglect, could be accomplished with the aid of photographs made by public-spirited camerists. On the other hand, if a city excelled in the beauty and decorative appearance of its park-system and other public property, the fact could be published to the world in the interest of the fortunate community. Much along these lines has been accomplished by camera clubs of certain American cities, with consequent benefit to the communities concerned and credit and profit to the groups of photographers responsible for the suggested improvements. There can be no progress without publicity of the right sort, and, although the press is an acknowledged power, no argument is so cogent, or produces an effect at once so impressive and convincing, as a well-made photograph.

The opportunities for camera clubs to participate in public service are numerous. Not only that, but some of these activities are really congenial. Besides, the work need not engage the attention of each member of a camera club. It can be distributed among members to whom it appeals, whereas a different class of activity can be assumed by other members. One of the latest and best exemplifications of this spirit of cooperation is the report—in pamphlet-form—of the public park commission of a large eastern city. It is illustrated with photographs made by eight members of the local camera club to whom full credit is given. An account of this contribution to civic welfare, with suitable illustrations, will be printed in an early issue of PHOTO-ERA.



ADVANCED COMPETITION



Closing the last day of every month
Address all prints to PHOTO-ERA, Advanced Competition
367 Boylston Street, Boston, U.S.A.

Prizes

First Prize: Value \$10.00.

Second Prize: Value \$5.00.

Third Prize: Value \$2.50.

Honorable Mention: Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

Prizes may be chosen by the winner, and will be awarded in photographic materials sold by any dealer or manufacturer who advertises in PHOTO-ERA, or in books. If preferred, the winner of a first prize may have a solid silver cup, of artistic design, suitably engraved.



Rules

1. This competition is free and open to photographers of ability and in good standing—amateur or professional.

2. **No more than two subjects may be entered, but they must represent, throughout, the personal, unaided work of competitors. Remember that subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era awards are announced.** Prints on rough or linen-finish surface are not suitable for reproduction, and should be accompanied by smooth prints on P. O. P., or developing-paper having the same gradations and detail. All prints should be mounted on stiff boards.

3. *Unsuccessful prints will be returned only when return-postage at the rate of one cent for each two ounces or fraction is sent with the data.*

4. *Each print entered must bear the maker's name and address, the title of the picture and name and month of competition, and should be accompanied by a letter, SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks sent for a 2c. stamp. Be sure to state on the back of every print exactly for what competition it is intended.*

5. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. However, this does not prevent the photographer from disposing of other prints from such negatives after he shall have received official recognition.

6. Competitors are requested not to send prints whose mounts exceed 11 x 14 inches, unless they are packed with double thicknesses of **stiff corrugated board, not the flimsy kind—or with thin wood-veneer.** Large packages may be sent by express.

7. Competitors who have won three first prizes within a twelve-month, become ineligible for two years thereafter. The too frequent capture of the first prize by one and the same competitor tends to discourage other participants and to make the competitions appear one-sided and monotonous.

Awards—Still-Life Competition

Closed February 28, 1920

First Prize: None awarded.

Second Prize: ROSS W. BAKER.

Third Prize: CHARLES A. HUGHES.

Honorable Mention: A. C. G. Allison, Joseph Bonanno, Fannie T. Cassidy, F. H. Chant, Daisie B. Chapell, Frederick Charavay, John Dove, James V. Dunham, James M. Edsall, Harry Footner, G. W. French, Geo. M. Gerhard, Henry H. Hussey, Emil and Edouard Kopp, H. E. Lovick, Guy E. Osborne, Dr. J. B. Pardoe, Chas. H. Partington, Kenneth D. Smith, Charles F. Spellman, W. Stelcik, J. A. Thompson, E. J. Webb, Elliott Hughes Wendell, Louis Werner, Jr.

Subjects for Competition—1920

"Twilight-Pictures." Closed January 31.

"Still-Life." Closed February 28.

"Nature-Studies." Closed March 31.

"Rainy-Day Pictures." Closes April 30.

"Miscellaneous." Closes May 31.

"Speed-Pictures." Closes June 30.

"Rural Scenes." Closes July 31.

"Shore-Scenes." Closes August 31.

"Outdoor-Genres." Closes September 30.

"Architectural Subjects." Closes October 31.

"Domestic Pets." Closes November 30.

"Indoor-Genres." Closes December 31.



Photo-Era Prize-Cup

In deference to the wishes of prize-winners, the Publisher will give them the choice of photographic supplies to the full amount of the First Prize (\$10.00), or a solid silver cup, of artistic and original design, suitably inscribed, as shown in the accompanying illustration.

Competitors Must Mind the Rules

COMPETITORS, in the Advanced Workers' and Beginners' Competitions, continue to ignore some of the rules, one of which is that the name and address of sender, also name, month and kind of competition must be written plainly on the back of each print. Otherwise, how is the jury to know? Besides, the Editors are too busy with other matters to stop to write to the careless competitor for missing information.



THE CUP THAT CHEERS

ROSS W. BAKER

SECOND PRIZE—STILL-LIFE

Clean and Foggy Lenses

"Why is it that my camera will not make as brilliant pictures as it did a year ago?"

Those of our readers, says *Kodakery*, who have asked this question are probably fortunate enough not to need eye-glasses, for wearers of glasses know, from experience, that the cleanness of their glasses determines the clearness with which they can see.

Those who do not wear glasses will, perhaps, best appreciate what a dirty or foggy lens will do to a picture, by cleaning part of a soiled window-pane and then looking out on a sunlighted scene through the clean and then through the foggy parts of the window.

Lenses are made of glass, and all glass, whether it is the kind used for making window-panes or the kind used for making lenses, becomes coated with a filmy deposit on prolonged exposure to the atmosphere. This is due to various causes, but the one that can most easily be observed is the condensation of moisture on window-panes which, on drying, makes the glass look foggy.

When a camera that has been out in the cold is taken into a warm room it should be kept closed for several minutes, so that the temperature of the lens will change slowly and none of the fine dust which is ever present, though it may be invisible, in living-rooms, becomes attached to the lens by condensing moisture.

Lenses do not condense moisture when they are suddenly taken from a warm room into the cold outdoor-air in winter. Condensation only takes place when the condensing surface is colder than the air in which the moisture is suspended.

Since the temperature of glass changes more slowly at all times of the year than the temperature of the air, lenses are constantly acting as condensers of moisture, and it is best to examine them often.

The first thing to do toward cleaning a lens is to remove any dust which may be on it. Use a camel-

hair brush for dusting. This is important, as removing dust from a lens by rubbing it with a stiff cloth or with a brush will be apt to scratch it.

After the dust has been removed breathe on the lens and wipe it with a clean, well-worn linen handkerchief which has been made soft by repeated laundering so that it will not scratch.

Lenses should never be wiped with any stiff cloth or with silk or chamois skin, nor should paper ever be used, unless it is the kind especially made for the purpose, and has been purchased from a dealer in optical goods.

Never clean a lens with alcohol or any kind of acid, and never use any kind of polishing-preparation on it, or it may be necessary to send it to the maker for repairs—which may prove expensive.

It is not often necessary to take a lens out of the shutter or the barrel in which it is mounted, as it is only the outer surface which is apt to become foggy, but if both the inner and outer lens surfaces do need cleaning be sure to remove and replace one combination before removing the other. If the combinations are transposed, so that the front combination is placed where the back one belongs, and the back combination is placed where the front one belongs, the lens will, in all probability, be useless until the combinations are placed where they should be.

Never remove a lens from its cell—the metal rings that hold it—for if this is done the lens may have to be sent to the maker for repairs.

Single lenses that are mounted behind the shutter are often built into the camera, so they cannot be removed. They can be cleaned with a piece of handkerchief wrapped around the head of a small pencil-shaped brush after the shutter has been opened as for a time-exposure.

Since foggy lenses make foggy-looking negatives and since it takes a brilliant negative to make a clean-cut, brilliant print, it is important that you should keep your lens clean.



FRUIT

THIRD PRIZE—STILL-LIFE

CHARLES A. HUGHES

Quality in Bromide Prints

PHOTOGRAPHIC quality cannot be defined as a standard result from a standard negative, says an English cotemporary. From a scientific point of view a piece of Bromide paper exposed for the correct time behind a negative, and developed so that all the light-action has been reduced or blackened, should give a perfect result of a standard quality, but in ordinary every-day work these rules are often broken.

Every good photographer concentrates on producing—apart from the art-side—technically good prints, and in most cases he is guided by the actual gradations of the subject or object itself; but it is often found that the negative does not truly reproduce the correct tone-values or gradation of the subject. Again, there may be a desire on the part of the photographer to emphasize some points of the picture in the same way as in rhetoric, where certain words are emphasized, or in histrionic art, where certain gestures are exaggerated. The practical man will, in order to obtain the desired result, resort to methods of control, or use a grade of paper that will by direct or controlled development give him a print combining proper rendering of tone with the equally important photographic quality.

It is a recognized fact that when Bromide prints are required for toning by the sulphide-process no "mon-keying" with the developer, or alteration in the full development time is permissible, consequently the only method of altering the rendering of the relative gradations of the negative—apart from mechanical control—is by choosing a grade of paper whose characteristics are soft or hard as may be required.

The photographer who specializes in warm black prints finds that the orthodox development to time with a normal developer does not give him the special tone. He therefore uses the special grades made for the purpose, and resorts to increased exposure and

restrained development, at the same time always aiming to obtain what that well-known critic, Mr. F. C. Tinney, calls "fatness of the darks," a phrase that aptly describes photographic quality.

A worker will deliberately falsify the gradations of a negative on business-grounds, as a vigorous gaslight-print of good depth from a thin negative is a better selling proposition than a gray, or greenish, flat Bromide print, and similarly a well-exposed Bromide print from a harsh, dense negative, will surely bring more "grist to the mill."

From an inspection of photographers' window-specimens we note a great improvement in the quality of the Bromide prints, and that the flat, muddy prints are conspicuous by their absence, but we often come across prints that are too harsh. The blacks are intense and blocked up, merging steeply into the highlights which are devoid of detail.

The Gum-Bichromate and Bromoil processes offer infinite scope for individualism, but none the less we contend that Bromide and kindred development-papers offer to the photographer, who has no special manipulative skill in drawing, great possibilities in controlled results by the judicious choice of grade of paper and method of working. The good quality of modern development papers makes it an easy task to produce prints full of photographic quality.

Why No Prizes Were Awarded

PARTICIPANTS in the Advanced Workers' Competitions never know why their pictures won only Honorable Mention instead of one of the three prizes, unless they ask to have them criticized, and thus learn the reason. This question was discussed editorially and at length in February, 1920, PHOTO-ERA and should prove of interest to every competitor, past and future.



FINAL INSTRUCTIONS

GEORGE W. FRENCH

Shading

It is a matter of some difficulty when shading a part of a negative in printing to prevent a more or less hard outline where the shaded part merges with the rest of the picture, says *The British Journal*. When printing-out paper is employed, the usual and the more satisfactory method of shading during the exposure is by the use of a piece of card moved backwards and forwards over the part of the negative that it is desired to retard; yet this plan tends to give hard edges. A good way to avoid this defect is to cut a series of fairly deep saw-like segments into the card at its edge, bending these in an upward and downward direction alternately. This idea is based upon the old-fashioned paper-mask or vignette used years ago, the edges of which were cut in the same fashion as the teeth of a saw. It will be found that if the plan mentioned above is carried out, and the printing-frame kept in a fairly weak light during the exposure, a very much softer result will be obtained and probably one that will give no indication that shading has been done. With developing-papers it will also serve, provided that the printing-light is well diffused and the card kept in motion. Of course, the idea cannot be carried out with the printing-machines and boxes that are so much used to-day. If a negative needs local shading, the printing-frame should be employed. The above method will be found to repay a trial.

Print-Surfaces

MANY photographers place much of their best work at a decided disadvantage, comments *The British Journal*, through neglecting to pay more attention to the surface of the printing-medium. Years ago there was little or no choice allowed among the printing-papers that were commercially available; but at the present time the reverse is the case. We find one of the best-known bromide paper-manufacturers listing over thirty different grades and surfaces of paper, and such a selection of surface is of immense value to the discriminating artistic photographer in presenting his work to its best advantage. In ordinary portraiture the selection of the surface of the printing-paper becomes of the first importance. For a dainty sketch-portrait of a feminine sitter or a child there is nothing to equal a print on a smooth matte or cream-base paper, and in the case of large head-studies of elderly people a rough surface is decidedly pleasing, for it has the effect of breaking up rough patches of skin, of covering up much of the work of the retoucher, and of adding a texture to the print that is thoroughly in keeping with it. Moreover, as prints are nearly always of fair size, and are viewed from a distance, for such, a rough paper is in every way suited. Other examples could be cited, but enough has been said to show the photographer the real importance of discrimination in choosing the surface of his printing medium.



SUBJECT FOR NEXT COMPETITION ADVANCED WORKERS



THE LAST QUARTER

H. B. RUDOLPH

Advanced Competition—Speed-Pictures Closes June 30, 1920

For several years, the competition devoted to speed-pictures has been omitted because other subjects seemed to be of equal or greater interest to most of our readers. However, there now seems to be a sincere desire among many workers for a competition that will enable them to add the element of motion to the usual problems of exposure and composition. To help realize the expectations of these friends, we have arranged this competition and no doubt it will prove to be one of the most popular contests held in recent years.

The usual interpretation of the expression, "speed-picture," is that the subject—whatever it may be—is rushing along at a tremendous rate. The average camerist visualizes an express-train, airplane, motor-boat race, baseball game or tennis-match. In great measure, this interpretation of the term is correct; but in this competition we have decided to include *all subjects in motion*. That is, a man walking along

rapidly would be an acceptable subject—other things being equal. Obviously, if there were no particular technical or artistic interest attached to the act of walking on the part of the man, this subject would fail to find favor with the judges. I do not mention walking because it would prove of exceptional interest, but to emphasize our intention to include subjects that are not usually considered to be speed-pictures.

With the approach of the summer-season, there will be countless opportunities for the camerist to obtain pictures in which the subject of a picture is in motion.

Although two kittens at play will not tax the maximum shutter-speed of a Graflex, there is apt to be plenty of motion and interest. Such a subject is well within the reach of a modest shutter-speed such as may be found on cameras of moderate price. Of course the element of excitement, though not of charm, is lacking. An auto-race is no easy subject to photograph successfully, even with the best equipment; and comparatively few of our readers have the time or inclination to devote to this strenuous branch of speed-photography.

In this connection, may be mentioned pictures of baseball games in which a player is caught in mid-air in an effort to stop the ball or in which he is sliding "home" in a cloud of dust. Pictures of this kind cannot be made by the average camerist because he does not have access to the points of vantage from which such pictures must be made. Besides they have been made familiar through the sporting-pages of the daily press. However, pictures that show the subject moving at high speed are welcome and have their rightful place in this competition. Many of our readers are press-photographers and these men often face great danger to obtain speed-pictures that portray realistically the excitement of the onlookers and the physical tenseness of the players in a football-game; the landing of an airplane; the rush of fire-apparatus or the trial-trip of some battleship. There are amateur photographers, too, who have run great risks to obtain speed-pictures and we should like to receive contributions from them. In short, those who have the opportunity and who possess the necessary equipment to make speed-pictures should send in their best work for the benefit of all.

It cannot be denied that high-speed pictures possess an indescribable fascination for most of us; but there are many subjects that are speed-pictures that obviate the necessity to risk physical injury or the need to have an expensive outfit. Can anyone imagine a more beautiful picture than a laughing happy little girl running open-armed toward her mother or a group of children romping on a lawn. Then, again, there are the pets of a household who may be counted upon to frisk and play for the benefit of the camerist. Let me mention a case in point. In my home there are two cats and a dog. This trio are the best of friends. However, when all three are out on the lawn, the dog delights to chase one or both of the cats—much to the evident pleasure of all concerned. The sight of both cats—apparently in terrified flight—pursued by the dog is one to cause passers-by to stop in consternation until in another instant all three are seen to be rubbing noses, as much as to say, "that's one time we fooled 'em!"

A railroad-train has ever been a popular subject for the camerist who wishes to make speed-pictures. The advantage that this subject possesses over many others is that it may be photographed virtually with any equipment provided that the camerist selects his point of view carefully. The fact that a train must follow the rails makes it possible for the worker to decide with accuracy at what rate of speed the train shall pass the camera. By that I mean, if he photographs the train as it approaches, head-on, he will require no high-speed shutter to "stop" the motion. On the other hand, if he wishes to make a picture at an angle of forty-five degrees he will require a focal-plane or other high-speed shutter. There is always something of the spectacular about a railroad-train in motion, especially if clouds of steam and smoke are belching from the smokestack of the engine. Although I have seen hundreds of railroad-trains in this country and in Europe and have traveled many thousands of miles, I still turn eagerly to watch a train whenever one passes near me. I have no doubt that there are many camerists who evince a similar interest, and for this reason I believe that there are many who should be able to photograph railroad-trains in an interesting and original manner.

Among the popular summer-sports none lends itself to speed-photography better than swimming. Whether the camerist attempts the portrayal of a stalwart swimmer preparing to battle with an approaching

"roller" or the more graceful fancy diving of an expert "mermaid," he will find much good subject-material of value and general interest. Moreover, the photography of ocean-waves, as they hurl themselves against the rocks or break on the sandy beach, may be considered speed-pictures. Flying spray, dashing waves are certainly in rapid motion and must be photographed accordingly. William S. Davis has contributed several practical papers in the August 1908, July 1910 and September 1915 PHOTO-ERA. Katherine Bingham called attention to speed-photography in her articles in the April and June 1915 number. The well-known writer, C. H. Claudy, gave PHOTO-ERA readers three excellent articles in the April 1908, January and April 1911 issue. Pictures of hydro-planes alighting on the water make exceptionally good subjects; for, if they are photographed carefully, they may be made to possess all the grace and beauty of a bird. Yacht-races lend themselves admirably to the requirements of this competition. There is no subject that is of greater general interest than a racing-sloop careened to leeward, with all sails set—including the enormous balloon-jib which seems to lift the vessel out of the sea. Motor-boat races offer additional material to the camerist, although it cannot be said that the average motor-boat race is a beautiful sight. It might be exciting and intensely interesting, but it lacks the grace and beauty that is added to the scene by the wind-filled sails. Canoe-races, water-sports and college-regattas are well worth the attention of the camerist.

Those who are eager to add an element of danger and excitement to the making of speed-pictures should attempt to photograph the wild-life of our shores, fields and forests. By referring to W. J. Jaycock's masterpiece, "Out of the Clouds," page 67, February PHOTO-ERA, the camerist may see the magnificent possibilities that are before him in the photography of shore-birds on the wing. No doubt many of our readers have seen the Chester Outing series of educational motion-pictures in which wild animals of the north woods are shown in their native habitat. One showed several moose, deer and bears at rest and in precipitate flight amid the beautiful scenery of the Canadian Northwest. Another, depicted a fisherman "playing" a large trout—it was a lively contest until the fish was landed safely in the net. Obviously, the camerist could not record such a scene in its entirety; but he could portray the final dash of the struggling trout and the skill of fisherman. A leaping fish is no easy subject to photograph, and the camerist will require much dexterity and a high shutter-speed to obtain satisfactory results. A picture that I remember to have seen and that made a deep impression was one of a large flock of flamingos in full flight over a palm-encircled Florida bayou. It was an inspiring sight even in the photograph. A resourceful worker should be able to make original pictures of flocks of birds during the migration-seasons of the year. Perhaps, one of the most fascinating pursuits of the lover of speed-pictures would be the attempt to photograph some of our American game-birds at the instant that they are flushed from cover. An excellent example of such a picture is "Holding a Point" by Howard S. Adams in May 1914 PHOTO-ERA.

It would be possible to enumerate other ways and means to obtain attractive speed-pictures; but I believe that the suggestions I have advanced will lead the enterprising camerist to discover many others. We feel sure that those who have asked for this competition will co-operate with us to make it a pronounced success.

A. H. B.



BEGINNERS' COMPETITION



Closing the last day of every month
Address all prints to PHOTO-ERA, Beginners' Competition
367 Boylston Street, Boston, Mass., U. S. A.

Prizes

First Prize: Value, \$2.50.

Second Prize: Value, \$1.50.

Honorable Mention: Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.



Subject for each contest is "*Miscellaneous*"; but original themes are preferred.

Prizes, chosen by the winner, will be awarded in photographic materials, sold by any dealer or manufacturer who advertises in PHOTO-ERA, or in books.

Rules

1. This competition is open only to beginners of not more than *two* years' practical camera-activity, and whose work submitted here, is *without any practical help from friend or professional expert*. A signed statement to this effect should accompany the data.

2. Workers are eligible so long as they have not won a first prize in this competition. Winners of the first prize automatically drop out permanently, but may enter prints in the Advanced Class at any time.

3. Prints eligible are contact-prints from $2\frac{1}{4} \times 3\frac{1}{4}$ to and including $3\frac{1}{4} \times 5\frac{1}{2}$ inches, and enlargements up to and including 8×10 inches.

4. Prints representing *no more than two different subjects*, for any one competition, and printed in any medium except blue-print, may be entered. They should be simply and tastefully mounted. *Subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era awards are announced.* Prints on rough or linen-finish surface paper are not suitable for reproduction, and should be accompanied by smooth prints on P.O.P., or developing-paper having the same gradations and detail.

5. *Unsuccessful prints will be returned only when return-postage at the rate of one cent for each two ounces or fraction is sent with the data. Criticism at request.*

6. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. However, he may dispose of other prints from such negatives *after* he shall have received official recognition.

7. *Each print entered must bear the maker's name, address, instructions, the title of the picture and the name and month of the competition, and should be accompanied by a letter, SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type, and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks sent for a 2-cent stamp. Be sure to state on the back of every print for what contest it is intended.*

8. Competitors are requested not to send prints whose mounts exceed about 11×14 inches, unless they are packed with *double thicknesses of stiff corrugated board*—not the flexible kind, or with *thin wood-veneer*. Large packages may be sent by express.

Awards—Beginners' Competition

Closed February 28, 1920

First Prize: OZAN K. NUNOME.

Second Prize: G. A. SMITH.

Honorable Mention: F. P. Adams, Thos. K. Flanagan, Carrie A. Ritter.

The Beginners' Great Opportunity

In the closing paragraph of my article for the Advanced Workers, page 201 of April PHOTO-ERA, I referred to Kipling's masterful story, "The Ship That Found Herself." In it he describes how a new vessel made her first voyage and how each bolt, rivet, stanchion, deck-beam and spar discovered its special function and learned to work harmoniously to make the great ship staunch and speedy. In this story, there is a great lesson which may well be taken to heart by the beginner who stands at the threshold of his first photographic season.

We will assume that the beginner has mastered the rudiments of camera-manipulation, that he knows a few of the principles that govern the use of the lens, shutter and diaphragm-stops, and that he is able to make a fair picture under average weather-conditions. Moreover, we will assume that he can develop a roll-film or plate and make a satisfactory print. Up to the present, he has devoted his entire energies to the mastery of technical fundamentals. He is like a violinist who knows how to attune his instrument to a great organ and who now stands before his audience ready to play his first concerto.

At this point in his photographic career, the beginner resembles Kipling's beautiful, new ship that is about to begin her first voyage. Everything that is humanly possible has been done to enable the ship to meet the onslaught of wind and wave—she sails out into the broad Atlantic to meet her test. Likewise, the beginner is about to meet his photographic test. If his preparatory work has been thorough, he will meet adverse conditions and overcome them; if not, he will go down to photographic defeat. I am not playing on sentiment by using this simile; I am dealing with practical facts. If the beginner is enough of a businessman to desire a fair return for the time and money he has invested, he will try to find himself, photographically, this coming summer.

In a measure, the subjects he decides to photograph will depend upon his environment. If the beginner spends his vacation-days at the seashore he will, in all probability, make more marines than landscapes. On the other hand, if the mountains prove to be more attractive than the seashore, he will seek his subjects among the woodlands or along the banks of some mountain-stream. In either case, he will have the opportunity to make interesting human-interest pictures. In this connection, let me caution the beginner not to make mere record-pictures of friends or family. A group that is worth photographing, is worth intelligent effort. Thousands of summer-snapshots become valueless in after-years because they include only casual acquaintances and have no technical or artistic merit. A snapshot of a total stranger



INTERESTING ARTICLE

OZAN K. NUNOME

FIRST PRIZE—BEGINNERS' COMPETITION

may possess perennial interest if it be really artistic. In short, each beginner should school himself to make every exposure count toward that happy day when he has found himself photographically.

Opportunity is short-lived unless we make the most of it. However, this does not signify that the beginner should use his camera like a machine-gun and literally "spray" his friends and the landscape with hasty, worthless snapshots. Opportunity, in this case, refers not to limitless pictorial material, but to hundreds of subjects—good, bad and indifferent—out of which the beginner must select his best subjects. Herein lies his opportunity to make good.

No matter where the beginner may spend his vacation-days, there will be certain local points of interest which he will wish to photograph. There will be usually *one* viewpoint from which each subject may be photographed to the best advantage—technically and artistically. It is "up to" the beginner to find it. This is another opportunity for him to utilize. Instead of making a hurried exposure, he should take the very few extra moments required to make a *good picture* that will be of permanent value.

These suggestions apply alike to the beginner who uses the humble, although effective, Brownie, and to the proud possessor of a *de luxe* camera. In each case, the equipment is but the tool of the beginner.

With it, he must work out his own photographic problem. No matter what the price of the camera may be, price alone does not and never will control the ultimate results artistically. The individuality, breadth of view and mental preparation of a beginner can alone make a masterpiece. The ability to give the atomic weights of the ingredients used in the

developer will not enable any beginner to make an artistic picture. Technical training is very important and highly desirable; but of itself it can produce nothing that makes an appeal to the heart and mind. The beginner must love the beauty he portrays before he can make the beholder love it. If a subject is cold and lifeless to him, the resulting picture will be so to others. It would seem that these statements were self-evident; but how many beginners stop to think of them?

Although I have often called attention to the importance to take photography seriously, I am going to mention it again. Not that I would have the beginner lose his enthusiasm, but rather that he should get more out of his photographic pursuit. To play a good game of tennis, a player *must* do certain things well. There is no quibbling about it. If he cannot make a well-directed return across the net, or he is unable to place the ball in any part of the court at will, he is not a popular partner in a tennis-match. He is compelled to take the matter seriously enough to be able to accomplish *results*. Unless the beginner in photography takes his pastime seriously enough to be able to make good pictures, he is no credit to himself or to photography. No matter how many blunders he may make, they will be overlooked if he is making a sincere effort to succeed. However, if he is merely "dabbling" in photography because "it is being done" in his particular social set, he is doomed to disillusionment photographically and otherwise. Let the beginner remember that whatever of energy, skill and thought he puts into the mastery of technical and artistic photography, he will receive far more in return than he thought possible.

A. H. B.



THE ARCH IN WINTER

G. A. SMITH

SECOND PRIZE—BEGINNERS' COMPETITION

Care of Photographic Shutters

THE importance of the proper care of photographic shutters is well brought out in a recent issue of *Kodakery*. Oil is an engine's best friend, but a photographic shutter's worst enemy.

Every photographic shutter has bearings, just as an engine, a machine or a watch has, but the bearings in a shutter work occasionally—usually for only a fraction of a second at a time, while the bearings in engines and machinery work continuously—often for hours at a time, and those in a watch work without stopping, for many months. Bearings that are constantly in action must, of necessity, be lubricated.

Photographic shutters are designed to work without lubrication; and oil, instead of helping will, invariably, handicap them.

A high-grade watch has jeweled bearings while a shutter has not. A watch is carried in the pocket or worn on the wrist, where its temperature is kept fairly constant. If it was left in a very cold room for a few days, or exposed to sudden and severe changes of temperature, it would not keep time, for the oil in its bearings would thicken and make it run slow.

A photographic shutter is freely exposed to the temperature of the air, and it is taken from warm rooms out into low temperatures in winter, as well as into very high temperatures in summer. It is exposed to sudden and severe temperature changes and it is so constructed that changes in temperature will scarcely affect it. If it needed oil it would work much slower in cold than in warm weather and the photographer would never know at what speed-marking to set the indicator to obtain the right exposure.

It is probable that more shutters are put out of order

by oil than by accidents and all other causes combined, and, after a shutter has been oiled it always needs the attention of the maker.

The best care that can be bestowed on a photographic shutter is to keep it clean outside and to let the inside alone. When this is done it will usually render good service for many years.

Important Notice to Competitors

THE EDITOR has a number of pictures, that were entered in the beginners' competition, on which no action can be taken because the senders failed to observe all the rules, including the first rule. Unless the contributor sends with each entry a signed declaration that all the technical work from the exposure of the picture to the finished print is entirely his own, the entry will be ignored. It is not for the Editor to take the time and trouble to point out any omission of the rules by the entrant. Until such a declaration has been received by the Editor, all entries will remain without any attention.



To the Point

STUDIO-PROPRIETOR, to cleaning-woman, "Now, go into the next room and clean the shelves, but look out and don't break one of those glass-negatives!"

Ten minutes later, as he was busy making a sitting, he heard an awful crash of broken glass. He rushed to the next room and demanded, "What on earth are you doing!" "Nothing, sir," came the prompt but doleful reply; "it's done."



THE CRUCIBLE

A MONTHLY DIGEST OF PHOTO-TECHNICAL FACTS

Edited by A. H. BEARDSLEY



Combines X-Ray and Motion-Picture

A COMBINATION X-ray and motion-picture apparatus, it is announced from Paris, is the invention of Drs. Lorman and Comandon. With the combined apparatus, pictures of animals can be thrown on the screen and the movements of the various organs shown. It is expected that, with modifications, the apparatus can be used with human beings as the objects photographed.

Two Fixing-Baths

A VERY large number of photographers still work with only one fixing-bath, and I wish to point out to them in this note what a great advantage it is to be obtained by the use of two baths for each batch of plates or prints. The great advantage is that it gives a guarantee of complete fixation; but this is not all: it gives cleaner results and, strange though it may sound, it saves chemicals. My own method is, in the case of prints, to give twelve minutes in the first bath and six in the second; after each batch of prints the first bath is discarded, and the original second bath becomes the first. In the case of plates I leave them in the first bath until all the "whiteness" has gone, and the same time, plus five minutes, in the second. When the time in the first bath exceeds ten minutes this is discarded, and the second takes its place. The fixing under these conditions is really complete, and therefore the washing may be cut down, because it is a proved fact that a well-fixed negative needs less washing than a partly-fixed one.—A. G. W., in *The British Journal*.

The Same Stop Requires the Same Exposure with all Types of Lenses

WHEN we speak of the so-called "speed" of a lens, says a writer in *Kodakery*, we refer to the F -value of its largest stop. The F -value is the relation that exists between the diameter of its effective aperture and its focal length. If, for instance, this diameter is 1 inch and the focal length is 8 inches the F -value is $1 \div 8$. This is called $F/8$.

The "speed" at which a lens works is determined by the amount of light that it transmits to the film, and although this depends on several factors, some of the light being absorbed and some reflected by the lens, yet for all practical purposes we may regard it as being determined by the F -value of the stop used. The larger the stop the more light the lens will pass and the shorter the exposure that needs to be given.

The largest stop on a meniscus, which is a single lens, is smaller than the largest stop on a rectilinear, which is a double lens. The largest stop on a rectilinear is $F/8$ (U. S. 4).

An $F/7.7$ anastigmat is nearly 8% faster than a rectilinear, an $F/6.3$ anastigmat is about 62% faster and an $F/4.5$ anastigmat is about three times as fast as a rectilinear, but, it must be remembered that when any anastigmat is stopped down to, say, $F/8$ it works at $F/8$ speed and it is then necessary to give the same exposure with the anastigmat as is needed with any other kind of lens that is used with stop $F/8$.

The rule is, to give the same exposure with all kinds of lenses when the stop used on each has the same F -value. When it is desired to give shorter exposure with an anastigmat than with other lenses the anastigmat must be used with a larger stop than the other lenses.

Some Practical Hints

TO OBTAIN SOFTER IMAGE ON GASLIGHT AND BROMIDE PAPERS

- 1st. Use more Metol and less Hydroquinone, than regular formula.
- 2d. Use developer at a colder temperature. Lower temperature causes somewhat the same effect as No. 1, as the temperature of developer has more effect on Hydroquinone than upon Metol.
- 3d. Use minimum amount of potassium bromide, just enough to keep the print clear.
- 4th. Short exposure and strong developer.
- 5th. Addition of $\frac{1}{2}$ grain potassium iodide to each ounce of developer. This works differently on some papers than on others.
- 6th. Develop without any alkali.

TO INCREASE CONTRAST OF IMAGE ON GASLIGHT AND BROMIDE PAPERS.

- 1st. Use more Hydroquinone and same amount of Metol, or less Metol, than regular formula.
- 2d. Increase exposure and dilute developer.
- 3d. Use greatest amount potassium bromide possible without change of color in print.
- 4th. Substitute potassium carbonate for soda.

G. MYRON ALLEN.

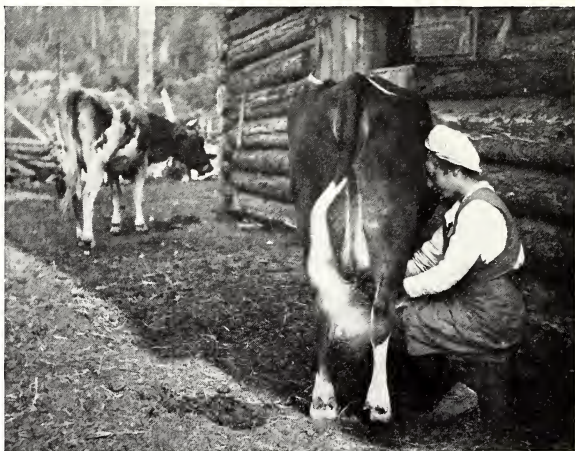
Unequal Illumination

THE causes of unequal illumination with rapid lenses when short exposures are made is well brought out editorially in *The British Journal*.

Users of very rapid lenses are frequently at a loss to understand why, when very short exposures are made, the center of the plate is fairly well exposed, and the corners are thin and lacking in printing-value. This is due to two causes. One is a cutting off of light by the mounting of the lens, which is particularly likely to occur with lenses having long tubes. The other is the fact that the corners are more distant from the lens than is the center, and consequently receive less light. The first cause may be removed by decreasing the diaphragm until it appears as a perfect circle; but the second is incurable by ordinary means. In his "Simple Guide," Mr. Dallmeyer pointed out that when the lens subtends an angle of sixty degrees on the diagonal of the plate, a common thing with small hand-cameras, the corners only receive half the illumination, which reaches the center, and at ninety degrees in the case of fairly wide-angle lenses only one-fourth. If full exposures are given the defect is minimized; with snapshots it is most evident. Several optical and mechanical devices have been introduced as cures, but have not been found applicable in everyday work.



OUR CONTRIBUTING CRITICS



YOUR CRITICISM IS INVITED

Whoever sends the best criticism (not over 150 words) before the twentieth of the current month, will receive from us a three-month subscription to PHOTO-ERA MAGAZINE.

The winning criticism, in our opinion, is the first one printed below.

THE eyes of five innocent young puppies should not present an appearance of sin-filled blackness; in life they are usually alight with mischief, and should be so rendered by the photographer. There is evidence of underexposure in the print in question, and this is aggravated by the turning of the puppies' heads so far to the right that the very slanting rays of the sun do not reach the eyes at all.

The photograph is an achievement with regard to the successful rendering of five little bundles of animation, and must have entailed a tremendous amount of patient labor; only the camerist who has endeavored to group two or three animals can appreciate what must have been necessary to obtain this little family group of five.

The print, *per se*, would be improved by trimming either the top or the bottom about one-half inch, there being an unfortunate stiffness about its present composition. Longer exposure, more careful lighting of the eyes—always the most expressive things in any

animal's face—and a slightly freer balance in the print seem to me to be the required improvements.

GORDON BALCH NEVIN.



I SHOULD like to offer my criticism on the picture I would call "Black & White." I cannot, however, make it technical, as photography is a still-very-young interest with me. The arrangement of the doggies is splendid; I cannot conceive a better one. The objection may be raised that it would have been better to include the object of their common interest; but it is wiser to leave that to the imagination. The comparative absence of foreground and background is detrimental to the picture, as a whole, since it almost leaves the quintet all "up in the air." The shadow of the ear on the first doggie from the left, as well as the shadow between its two forelegs, and the faint image of one of its hind-legs, would improve the picture only by being removed; and the gaze of the doggie next to it, should not have been allowed to wander.

Y. BILLY RUBIN.



THIS photograph shows evidences of a "soot-and-whitewash" effect which was probably more pro-



THE PICTURE CRITICIZED THIS MONTH

nounced in the original than in the reproduction. The close-up subject with strong contrasts calls for full exposure. With stop F/16 on a medium plate I would give a full $\frac{1}{2}$ second—certainly not less than $\frac{1}{5}$ second, even at the risk of movement. For an exposure of $\frac{1}{25}$ second, use a fast plate and stop F/8 or larger.

The vignette is rather abrupt and is marred by the dark folds in the background. These, together with the slightly distracting pattern of the rug, could be removed by a little pencil-work on the negative. I have seen some wonderful pictures of puppies where the vignette faded into darkness instead of white paper—sepia on cream-stock.

The attention of the subjects is too carefully held by the assistant: a "sprawly" effect is "cuter;" but it requires endless patience. Edna is some imp, I'll say.

WINN W. DAVIDSON.



MIGHTY clever! If you don't think so, try to get *five* pups, or even two, with concentrated interest and in a pleasing arrangement such as the maker of this print has done. Notice particularly the arrangement of the two black pups between the three white ones. It takes patience to produce a print of this kind.

The print, however, suffers from underexposure. The coats of the black dogs are devoid of detail and those of the white ones have no gradations at all. The eyes of all five pups are solid black. With the harsh lighting, full exposure should have been given to overcome this; there was no need to stop the lens down to such an extent as was done in this case. The vignetting is not particularly well done.

C. B. WEED.

THE general arrangement is poor, owing, in part, to the monotony of the postures of the dogs. The posing is also awkward. The exposure was much too short, which renders the black pups very much jumbled in appearance. The focusing, too, could have been done more carefully. By the way, has the white pup on the left three legs in front instead of two?

Five pups at this age are peculiarly susceptible of interesting arrangement, and the present examples are no exception to this rule. They could have been shown rolling around or playing with each other, as they do, and a real picture might have resulted.

LYNDEY BOURKE.



THE first point to which attention may be called, is the grouping. This is obviously arranged, with alternate light and dark; and, although such arrangement might be commended in treating certain subjects, in this case it emphasizes the artificiality and lack of spontaneity, which should be a feature of a subject such as this. These puppies had no hand in the arrangement, and could hardly have been less successful if allowed to compose themselves, for almost any natural grouping would have been preferable. The background is not the most suitable for a vignette. Technically the print shows signs of underexposure, which reference to the data confirms.

THOMAS FARMER.



SUBJECT—good but difficult. Exposure—one-fourth of correct exposure. Development—probably, too much. Vignetting—should be prohibited by law.

E. R. MORTON.



OUR ILLUSTRATIONS

WILFRED A. FRENCH



THE subject of the April cover—a magnificent landscape by David J. Sheahan—was so well received, that we are glad to adopt the suggestion of several interested subscribers to publish another picture by another P. P. of A., to serve as the initial decorative illustration for the current issue. The subject is St. John's Cathedral, situated on Columbia Heights, New York. The edifice, only partly finished, rises majestically in the midst of a richly decorative setting, and is greeted by the morning-sun. The artist, James C. Coppola, of New York, is a member of the Pictorial Photographers of America, to which group of workers he does credit by reason of his eminent artistic talent. Data: July, 9 A.M.; bright sunlight; 5 x 7 Seneca camera; 8½-inch Wollensak Velostigmat Series II; stop, F/4.5; 1/25 second; Standard Orthonon; pyro; Bromoil print.

"Lake-Birches," by Amos A. Falls, forms a worthy frontispiece. It is one of the most successful and pleasing foreground-studies that I have seen and will merit justly all the praise that it doubtless will receive. The material has been utilized with rare artistic judgment; the lighting is superb, and the lake, as well as the distant shore, has been adjusted harmoniously, in definition and tonal value, to the main point of interest—the clump of birches. Data: August, 3 P.M.; hazy sunlight; 8¼-inch Goerz Dagor lens, fitted to 4 x 5 Cycle Graphic; stop, F/8; B. & J. 3-time color-screen; 1/5 second; 4 x 5 Cramer Iso Double-Coated; pyrosoda, tank; Buff Cyko enlargement.

Although Mr. Harrison has mentioned the *modus operandi* of most of the pictures that illustrate his paper on telephotography, he has provided special information regarding the subjects as follows:—

"Over the City," page 223; late evening in October; 3A Graflex; 7-inch Wollensak Velostigmat Series II; stop, F/11; 1/25 second.

"The Cathedral," page 224; 35-inch telephoto; stop F/8; 15 seconds; 3-time color-screen; Velox print.

"The House of the Sunken Gardens," page 227; 3A Graflex; 7-inch Wollensak Velostigmat Series II; stop, F/8; 1/50 second.

"A Charming Entrance," page 228; 15¼-inch Cooke-Telar; stop, F/13; 1/25 second.

"Spring," page 230, is by E. M. Pratt, specimens of whose admirable work have appeared in *Photo-Era* during the past few years. Mr. Pratt as well as David J. Sheahan, James C. Coppola and many others, is entitled to use the initials, P. P. A., after his name. Yes; this is a hint to President White of the P. P. of A.

The picture portrays a spring day in California and, as a pictorial composition, exemplifies Mr. Pratt's well-known artistry. Data: May, 8 A.M.; 10½-inch Struss Pictorial Lens; K-2 color-screen; 1/16 second; Standard Orthonon; Aduril in tank; Artura Carbon Black, Grade E; M. Q. developer.

The author of "Mother Brook," page 233, offers no apology for the sharply defined photograph of a worthy pictorial theme. In those early days of amateur photography, in 1880, it was an unpardonable offense to produce a picture other than absolutely sharp from edge to edge, and from the immediate foreground to the most remote object in the horizon. To accomplish this praiseworthy result, a small dia-

phragm—generally F/22 or F/32—was employed, and this, together with dryplates of low sensitiveness, necessitated a relatively long exposure—from about 6 to 12 seconds, according to the strength of the light. The anastigmat, with its perfect definition at a large aperture, had not yet arrived; consequently, lenses (objectives) of the rectilinear type, or of the single achromatic form, were used. Some of the former were the Ross Rapid Symmetrical, Darlot Rapid Hemispherical and Voigtlander Euryscope.

It was the intention of the writer to photograph this scene, from the same view-point, last autumn (late October) and with the same lens, which is still preserved, but with a stop much larger than the one that was used in 1880, which was F/22, and to produce a slightly diffused result; but the opportunity to do so did not present itself. Were the view to be photographed again, and if the same objects existed as they did forty years ago, it is probable that the tree at the right would be omitted. Also, a few clouds would be desirable, to relieve the monotony of the sky. The picture reproduced in this issue was considered meritorious, artistically and technically, by the members of the local camera club of that period. To-day, a straight print from the original (6½ x 8½) negative would be treated with scorn by everyone but a purely commercial photographer. Its appearance, to-day, may be justified on the ground that it may serve as suitable accompaniment to the episode related by the author on pages 232 and 233.

Those who must have read with unmistakable pleasure and satisfaction the beautifully illustrated nature-stories by Frederick B. Hodges, that appeared in *Photo-Era* during 1913, 1914, 1918 and 1919, will undoubtedly view Mr. Hodges' superb picture, "The Curving Wood-Road," page 234, with a feeling of delight. How can they help it? The composition is above reproach, the performance masterful, and the sentiment fully in accord with the beautiful verses on the opposite page. Data: July, 2 P.M.; good light; 8 x 10 Century Camera; 11 7/8-inch Tessar, F/6.3; used at full opening; 1/25 second; Eastman Portrait Film; pyro; print on Azo, Grade A, clouds printed in.

The views that illustrate the pilgrimage of two camerists to Provincetown, pages 236 to 248, have their data in the narrative itself.

Advanced Workers' Competition

ROSS W. BAKER, the winner of the second prize in the Still-Life Competition, appears to have a sense of humor, as the innocent-looking beverage in his tastefully arranged picture, page 251, indicates. "Tasting is believing," as the anti-dry would say. Nevertheless, there is not the slightest doubt that the stimulant so daintily served on this immaculate table, and in so well-ordered and delightful a home as Mr. Baker's must be, is conducive to spiritual thoughts. Whether or not the sugar is crowding the teapot, or the "still" life group needs space and air, at the top, is a debatable question. A pity that the beauty of tone and texture of the original print is not indicated in the reproduction. Data: January, 9 P.M.; Welsbach light; 3 minutes; 5 x 7 view-camera; 12-inch Wollen-

sak Verito; stop, F/6; W. & W. Panchromatic; pyro, tank; contact Azo E. Hard print.

"Fruit," page 252, is a hackneyed theme, but unusually well-done. The composition is in pyramidal form; the lines are irregular, but graceful, and the distribution of light shows exceptionally good judgment. Data: Sept., 3 p.m.; dull light; 8-inch R. R. lens; stop, F/16; 5-time color-screen; exposure, 3 minutes; Cramer Inst. Iso; Elon dev.; enlarged on Azo A. Hard.

Though technically a still-life composition, "Final Instructions" is teeming with simulated animation. Responsive intelligence seems to emanate from those artificial eyes. The theme is strikingly original and is highly creditable to the imaginative skill of its author. Data: October, 1919; 2 p.m.; light from bright sun; 5 x 7 Seneca; R. R. lens; at F/16; 3-time color-screen; 2 seconds; Standard Orthonon; pyro; enlarged on Artura Carbon Black E.

"The Last Quarter," by H. B. Rudolph, page 254, was published originally in December, 1917. It is used here as a good example of high-speed work. I referred to the picture, at the time, as follows:

"With usual love of the pictorial, H. B. Rudolph has given us a living example of a summer-sport, with appropriate concomitants of the vacation-season. The artist, a consistent prize-winner, has exercised excellent judgment in forming his group of speeding horses; even the last in the procession inclines obligingly towards the center of the picture. The proportions are admirable, and, while the four racers are foremost in the matter of interest, one cannot ignore the faint, curving line of spectators and the effective setting of the park and sky. Data: July, 1917, 3 p.m.; hazy light; 5 x 7 Century; 7-inch Euryplan anastigmat; F/4.8; 1/1000 second (Multi-Speed shutter); Seed 50 plate; hydrometol, in tray; enlarged part of negative on P. M. C. Bromide No. 2; Kathol-hydro for development; clouds printed in from separate negative."

Beginners' Competition

THE winner of the leading picture in the junior class has certainly acquitted himself nobly. The theme is well conceived and but for a little crowding of the two figures and the unfortunate appearance of the background—which careful focusing would have obviated—the picture would have proved worthy the skill and reputation of a P. P. of A.! Data: May, 3 p.m.; cloudy; 4 x 5 Graflex; 7-inch Goerz Dagor; stop, F/8; 1/25 second; film-pack; Eastman pyro; Azo F. Medium.

"The Arch in Winter," by G. A. Smith, gave the first-prize winner "a run for his money"—in the language of modern slang. Successful figure-studies are generally deemed more difficult to achieve, and that is why the jury favored Mr. Nunome. But Mr. Smith has produced a remarkably interesting picture—one in which the arch has been given a truly beautiful setting. Mr. Smith is to be congratulated. He is unmistakably on the right road to pictorial success. He has my best wishes. Data: January, about 3 p.m.; good sunlight; 4 x 5 Graflex; 7½-inch B. & L. F/4.5; at F/8; 1/25 second; 4 x 5 Premo Film-Pack; Eastman Special Developer; contact-print on Azo Soft, Grade F.

Our Contributing Critics

OUR readers who "know a good picture when they see one," or how a poor one could have been improved, will have an opportunity to accord constructive criticism to "Milking," by Miss E. Kneller. This lady, eager to improve her photographic ways, has trustingly

placed her interesting rural composition at the chivalrous disposal of her fellow-readers. Data: September 10, 1919; clear sky, sunshine; 6.15 a.m.; 1/10 second; Premo Film Pack 3¼ x 5½; Eastman Tank Developer; bromide enlargement.

The Choice of a Printing-Paper

EVERY practical photographer knows that it is easier to produce the best results if a paper is selected which is made specially for the work in hand, or the type of negative to be printed from. According to an English contemporary, that is the reason why the sensitized paper-manufacturer is compelled to make such a large variety of papers.

The press-photographer uses a Glossy Contrasty Bromide paper which is specially made for his work. The high-class portrait photographer likes to use a soft grade of Mat-Bromide or similar paper. The dealer or chemist will use gaslight or Rajo paper for amateurs' "finishing," on account of the great contrast it gives from the frequently under-exposed films, yet he may have perforce to use Bromide paper for some of the more exposed or harsher negatives.

The demand for printing-papers of special characteristics is surprising, and we make quite a feature of the production of these papers. For instance the X-Ray or Aerial Photographer demands a special paper that will give good contrasts and render fine detail on a highly glossy surface, the Drawing Office of the large Engineering Firms is supplied with a Mat-paper of great speed for copying drawings in the camera, while the scientific worker, or the poster and label designer, will use a panchromatic paper relatively sensitive to all colors.

In the summer-season the printing-out paper and self-toning papers are still in great demand among amateurs, and there is no gainsaying the fact that the results produced on these papers are very fine, even from quite a variety of grades of negatives.

The surface of a printing-paper plays an important part in the best rendering of a negative. A very harsh negative will often yield a better-looking print on a Mat-paper than on a glossy surface, while thin delicate negatives may give the best results on a glossy surface. Enlargements of three diameters and upwards are best made on the rough-surface Bromide paper. The Satin surface is mostly used for direct work where little or no "finishing" is required, and both the Mat and rough surfaces lend themselves to working up.

There is much scope for individuality in the use of the Cream papers of different surfaces especially when the prints or enlargements are toned.

But always follow the makers' instructions. The best developer is always the one he recommends.

The Value of Just Criticism

THE following paragraph is taken from an address delivered by President C. Atkin Swan, Esquire, president of the Royal Photographic Society, London, England.

"Criticism, of course, is excellent. I have been criticised here. Somebody told me my slides were not worth looking at, that I had better never have made them; better still, never have made the original negatives. The criticism did me good. I looked at them again, and saw that they were not satisfactory, and made a present of them to a Sunday-school teacher, who has never been near me since! We must have criticism, but it is equally necessary that the criticism should be properly founded."



ON THE GROUNDGLASS

WILFRED A. FRENCH



Photographic Ignorance in Congress

ALTHOUGH members of both houses of Congress—when these bodies are in session—are absorbed with the disposition of many perplexing questions, it does not follow that they possess no knowledge of photography. Far from it. Several members of the Senate and of the House, and their secretaries as well, are readers of PHOTO-ERA, consequently, when a representative of the people happens to reveal a lack of familiarity with one of the simplest rudiments of camera-activity, the circumstance is recognized at once, and the result causes general amusement. For the incident, related below, I am indebted to the secretary of a prominent Representative who is also a subscriber to this publication.

The lower branch was discussing, recently, the question of treating sick and wounded ex-service men in a certain army-hospital that lacked adequate lighting-facilities—a condition that was made clear by means of photographs made by a professional expert. The part of the discussion that contains the humorous element is quoted directly from the *Congressional Record*.

"MR. JOHNSON (of South Dakota): In picture No. 3 is Frank Hoppé, of 1003 North Lincoln St., Chicago. This picture shows four beds in another dark hallway in the Marine Hospital in Chicago. Every patient, every doctor, every nurse that walks back and forth from one part of this hospital to the other must pass directly by the four beds. The other three men are able to walk around and get a little fresh air, but although I was there in the middle of the day, I know that the only light that Frank Hoppé receives he gets from the electric light which is directly over his head. And if that is any way to take care of a patient in any hospital in the world I do not know it.

"MR. BLANTON: In regard to this picture of the dark hallway, it does not show that it was taken by any flashlight, so it seems that the dark hallway was light enough to have the photograph taken.

"MR. JOHNSON: The gentleman is mistaken; it was made by a flashlight. I was standing there when the picture was made. (Laughter.)

"MR. BLANTON: *It does not show in the picture.*

"MR. JOHNSON: I will tell the gentleman and that will settle it.

"MR. CHINDELMOM (of Chicago): Does the gentleman from Texas expect that the picture would show the flashlight itself?

"MR. BLANTON: *Usually they do.* (Laughter.)"

Mr. Thomas Lindsay Blanton is a Democrat, a lawyer, 47 years old, and comes from Abilene, Texas. He is a member of the House-Committee on Education (*Education*, mind you!) and Woman Suffrage. He is the same gentleman that Sam Gompers took a rise out of recently by declaring that he wouldn't know the truth if he saw it, and wouldn't speak it if he did—but Gompers is pretty quick on the trigger these days, as you have probably noticed.

All of this leads to the conclusion that when we have men so colossally ignorant on so well-known a subject as flashlight-photography—with the rudiments of

which one would suppose everyone was acquainted—in our National Congress, so often called with unconscious humor "the greatest deliberative body in the world," it is hardly to be wondered at that, in the hasty organization of an immense expeditionary force, incompetence resulted in high places, as well as low.

A Terpsichorean Lens

PROFESSOR LIGHTFOOT conducted a high-class dancing-school as a vocation; but was also an ardent amateur photographer when the opportunity offered. He was interested especially in pictorial photography and a strong advocate of the soft-focus lens. There was hardly a lens of this type that he did not possess or had not used. His hobby was divided between a study of the pictorial and an insatiable desire to own the very latest soft-focus lens that might appear on the market—no matter how often a new one made its appearance.

Recently, he learned, through a friend, of a new type of soft-focus lens. Being a little hard of hearing, he failed to catch the exact name of the lens, and on the morning that he found time to call at his dealer's he approached the salesman in rather a hazy frame of mind.

"Good morning, Prof. Lightfoot, what can I do for you this morning?" the salesman said, pleasantly. "That is exactly what I am trying to decide myself," replied the professor with a smile. "You see, I have just left a dancing-class and I am trying to recall what I came in to see you about. Oh, I have it! You know that last soft-focus lens I bought of you has given me nothing but frightfully jazzed backgrounds." "Jazzed backgrounds!" exclaimed the salesman in astonishment. "What do you mean?"

"Oh, excuse me. Of course you don't understand," replied the somewhat perturbed professor. "For the life of me, I can't forget my dancing. What I mean is a background filled with large circles of confusion or large round spots and generally 'busy' with conspicuous patches of light and shade."

"I see what you mean now," laughed the salesman. "Well, what I want," continued the professor, "is a soft-focus lens that will eliminate such a background and reduce the halation around objects that are light—such as a man's white collar. A friend told me about a new syncopated lens."

"Syncopated lens?" queried the salesman, amused and bewildered. "Yes, isn't that what you call it?" asked the professor, unconscious of his use of the modern terpsichorean term. Suddenly the salesman's bewilderment gave way to ill-concealed mirth. "You mean the new Synthetic lens, don't you?"

"So I do, so I do," admitted the dancing-master, and both joined in a hearty laugh.

The Way of a Maid with a Man

FOR the encouragement of young men in love let us say that a great many girls say "No," at first; but, like the photographers, they know how to retouch their negatives.



ANSWERS TO QUERIES



C. A. O.—The stains on the paper appear to be due to incomplete fixation, although you seem to have taken the usual precautions. Perhaps you put your finger on the cause accidentally when you speak of the combined action of air and hypo. Prints should be fully and carefully immersed in the hypo when first put in. They should not be taken out for at least five or ten minutes. If you use hypo-solution of 6 ozs. to the pint and temperature over 60 degrees F. you should not have this fixing-stain. If this is done, we know of no paper which will not yield satisfactory prints in this respect.

R. E. H.—That formaline added even in small quantities to pyro-soda will not affect the action of the developer, is a statement we would not care to make. However, we think that it will, owing to the readiness with which formaline forms compounds with hydroxy substances, but very little is known of its action in this respect. A better course is the use of a formaline-bath before development.

C. O.—Printing on an egg-shell is possible if the shell be sensitized and the picture projected upon it by means of an enlarging outfit or similar equipment well stopped down. However, it is probable that the picture you saw was not printed directly on the surface of the shell but was applied by one of the transfer-processes. It might be possible to transfer a carbon-print to an egg-shell and we should think that there would be little difficulty to transfer a print made on Kodak Transferotype bromide paper.

S. E.—A negative may be turned into a positive by developing the negative fully. Then, instead of placing it in hypo, immerse it in a solution of ammonium persulphate of about five per cent strength. The developed negative image is dissolved out by this solution, leaving an undeveloped positive image. This positive image can be darkened by immersing the plate in any ordinary non-staining developer in daylight. The plate should then be washed and dried. The process is interesting; but unless plates or papers could be obtained specially coated to adapt themselves to it, it is hardly usable in practice. We may say that a parallel method is invariably used in autochrome work to convert the negative autochrome, which is obtained on developing, into the positive autochrome which constitutes the finished result.

M. K. J.—The advantage of a double-extension camera is that you can focus objects much nearer the camera and therefore can get them on a larger scale than with a single extension. This would certainly be useful in copying and possibly at times in portraiture. With landscape, it would only be advantageous should you wish to use a lens of longer focus; but probably if you became sufficiently interested in landscape work to get a long-focus lens, you would be likely to get a view-camera.

C. K. W.—The use of a single lens for architectural work is not advisable because straight lines near the edge of the picture will be rendered usually with more or less curvature. However, many times this distortion may be unnoticed. The leaning-over effect is obtained with any lens, if the camera is

tilted up or down. Unless the camera is equipped with a swing-back, it is impossible to avoid distortion.

S. A. H.—A solution of which ten minims contained one grain is not an exact ten per cent solution; but it may be made easily. Dissolve the pyro and the preservative in a less quantity of water than a ten per cent solution would require—five ounces of water to one ounce of pyro can be used easily—and then dilute with water until the total bulk of the solution contains ten times as many minims as there are grains of pyro added. The actual quantity of potassium metabisulphite does not matter very much.

B. C. G.—To make fire-light photographs the method adopted is to use the light in a very low position. For example, if you have French windows coming right down to the floor, you could cover up all except the lowest foot of the window and place some white paper on the floor just inside of the window to serve as a reflector; arrange the fender and fire-irons in front of this and you will illuminate a sitter as if by firelight. For artificial light, you could use magnesium-ribbon or a flashlamp in the actual fireplace. To obtain the firelight effect in the finished print, some workers use a red-coating solution and some a red stain.

Home-Portraiture by Amateurs and Professionals has been treated in the most capable manner in PHOTO-ETX since its publication. Among its most useful and best-written articles, by expert specialists, are those by Katherine B. Stanley, fully illustrated, in April, 1911; by Felix Raymer, illustrated in September, 1911; by Katherine Bingham, illustrated in January, 1913; "Photographing the Baby," by Albert B. Niess, in April, 1915; by Norman Butler, illustrated, December, 1916; by Katherine Bingham, in March, 1917; Illustrated Competition, in 1917, and by H. B. Rudolph, illustrated, October, 1918.

A. G. S.—For finishing prints with a glossy surface, a paper prepared with a naturally glossy surface should be employed. The most simple and satisfactory method to work is as follows: The prints, after fixing and washing, should be immersed in a formaline-bath—formaline $\frac{1}{2}$ ounce, water 5 ounces—for two or three minutes, washed for a quarter of an hour, and then dried. A glass, celluloid, or ferrotype plate is washed and polished with a soft fabric, first rubbing on with a flannel a solution of 20 grains of beeswax in 1 ounce of turpentine. The print is soaked in water until thoroughly limp, and then a liberal quantity of water is thrown on the polished plate, and the print placed face downwards on the plate, care being taken that there is plenty of water between the two surfaces. The print is next firmly squeezed into contact, interposing a sheet of rubber cloth between the print and the roller squeegee. When quite dry, the print will leave the plate very easily, and its surface will possess a high gloss. This surface is hard and durable, due to the employment of the formaline-bath, but it is well to back the print with a waterproof sheet so as to prevent the mountant from affecting the glaze. This method has proved to be efficient and eminently successful in actual practice. There are several methods that are of interest to amateur and professional photographers.



EVENTS OF THE MONTH

Announcements and Reports of Club and Association Meetings, Exhibitions
and Conventions are solicited for publication



Review of Pittsburgh Salon

ALTHOUGH we made every possible effort to include the review of the Seventh Annual Pittsburgh Salon of Photography in this issue, unavoidable delays beyond our control have caused the postponement of this feature until the June number. This review will be illustrated by a selected number of masterpieces.

Safe and Profitable Investments

PHOTO-ERA readers will notice in this issue an innovation in the magazine's advertising-policy, viz., an advertisement of a dealer in high-grade investment-securities.

With the exception of the advertisement of a well-known local bank of deposit, the Publisher has excluded, heretofore, advertisements of a financial character, particularly the sale of certain stocks and bonds, because of the responsibility involved, and the difficulty to obtain positively reliable information.

But in view of a general desire to invest money advantageously and safely, or to speculate conservatively but profitably, or to exchange good securities for better ones, the Publisher of PHOTO-ERA personally solicited the advertisement of an absolutely honorable, trustworthy and conscientious firm—one whose dealings he can endorse with confidence based upon personal and highly satisfactory results. The advertisement will be found elsewhere in this issue.

Success of America's Pictorial Annual

THE first effort to issue a collection of pictures illustrating the work of American photo-pictorialists, has met general success. The book was favorably endorsed in April PHOTO-ERA MAGAZINE, whose Publisher has still a few copies left. Price, \$3.50 each, sent postpaid to any part of the United States, Canada and Mexico.

An Appreciative Letter

MARCH 27, 1930.

PHOTO-ERA MAGAZINE, Boston, Mass.

I am going to take the plunge. After several years of more or less photographic success amaturishly (?), I am going to choose to enter that business as a profession. PHOTO-ERA MAGAZINE has been one of the most powerful—in fact, the most powerful—agent I have known in teaching photography—good photography—to me. I believe that every one of your readers will join me in the sentiment that PHOTO-ERA has grown more, has advanced more, and has elevated itself more than any other photographic magazine in the United States.

I am very certain that in my future professional business, PHOTO-ERA will be at my finger-tips at all times, as a reference book of unequaled quality. I owe much to PHOTO-ERA for its invaluable mines of information.

FREDERICK C. DAVIS.

Editor Beardsley Takes a Vacation

THE mental and physical demands made upon the editors of PHOTO-ERA have increased steadily with the growing popularity of the magazine. For many months, the regular correspondence, criticism of pictures, answers to queries as well as the editorial and mechanical preparation of the magazine, have entailed a tremendous amount of hard work which has taxed the endurance of all concerned. As a result of these arduous duties, Mr. A. H. Beardsley, Assistant-Editor, is to enjoy a well-earned rest of three months in the mountains of New Hampshire.

Mr. Wentworth's Pictures

THE exhibition of photographs by Bertrand H. Wentworth, of Gardiner, Maine, which was held in the gallery of the Society of Arts and Crafts, Boston, U.S.A., during the last two weeks in March, proved to be a source of genuine delight. In the interpretation of atmospheric effects and perspective, they represent the last word. They afford pleasure even to the most exacting art-critics, for in purity and beauty of tones, these pictures of mist-laden shore and island rival the finest efforts of the master-painter. The impressive scenery of rocky Monhegan familiar to Mr. Wentworth by long visits and studious observation, has yielded up to this artist-photographer all its mystery and charm which, through his expressive medium of lens and paper he has translated into visions of beauty.

Mr. Wentworth's technical mastery is supreme; indeed, it seems as if his pictures were spontaneous creations. This is true of his shore-views, and of his winter-scenes—in the woods and in the open. A view of a patch of golden rod relieved against a subdued background of evergreens, of this collection, is one of many that will live long in the memory. It is also interesting to note that each of Mr. Wentworth's pictures bore an appropriate and felicitous title. The exhibit consisted of thirty-six enlarged prints and had been seen previously in Brooklyn, New York, Poughkeepsie, Newark, Philadelphia, Washington, Indianapolis, Cleveland, Detroit, Grand Rapids, and Chicago.

What has Happened to Photo-Era?

SINCE last summer, the office of PHOTO-ERA has received a constantly increasing number of letters from photo-dealers in this country, Canada, and elsewhere as follows:

"Please change my standing order for copies of PHOTO-ERA from 12 to 20 copies;" "My order should read from now on 30 copies of your fine magazine instead of 12 as heretofore;" "Please make our order read monthly—40 copies, and not 30 copies, beginning with the May issue;" "You will kindly increase our regular order to 26 copies per month" (this from a dealer in Canada); "Please continue to send us 30 copies a month. The February number was sold out in two days;" "We enclose cheque to pay for 42 copies of PHOTO-ERA a month for one year beginning with the

May number" (a Chicago dealer). And thus it goes. This entire page could be filled with communications like the above.

A Threefold Credit

RARELY has an issue of PHOTO-ERA created so favorable an impression as the one of April. Although the illustrated camera-tour through southern France, by Herbert B. Turner, was a winning feature, it was the delightfully artistic cover in grayish blue ink that attracted the attention of art-lovers, including professional artists who purchased copies wherever they were displayed. The entire allotment in Boston was sold out in a few days.

The credit, then, is due to Herbert B. Turner, David J. Sheahan, whose picture beautified the front-cover, and to Geo. H. Ellis Co., printers of PHOTO-ERA.

Claude L. Powers

It is with regret that we record the death, on March 19, of Claude L. Powers, of Claremont, N. H., who was held in such high esteem by members of the Photographers' Association of New England. Mr. Powers was First Vice-President of that association several times and had always taken an active and influential part in the association-work. Moreover, he was one of the original organizers of the New England Association. He was the president for 1920 of the New Hampshire Photographers' Association. Death was due to valvular heart trouble. Mrs. Powers and one son survive him; we extend our sincere sympathy to them both.

Reversed Negatives

ALTHOUGH an article for beginners recently dealt with the phenomenon of a plate or film developing up as a positive instead of a negative, says *The Amateur Photographer*, we continue to get specimens of such results sent to us, with expressions of surprise at obtaining them, and with a request for an explanation. Reversal from excessive overexposure has long been known; but reversal in the case of underexposure seems to be a comparatively modern trouble. It is most often met when an underexposure is developed in a full-strength developer for a long time; and is apparently due to the unexhausted developer in the least exposed parts fogging the unexposed emulsion lying beneath the image. It may occur with a film developed in complete darkness in a tank; but is unquestionably helped when the developing negative is exposed to an unsafe light. The positive is too feeble and irregular to be of any service, so that the only advice that is of use is to take care always to expose correctly.

Dusting Plates

Most of us probably have got over our desire to play childish games, remarks *The British Journal*, but let the reader unbend for a while and note a description of a very favorite pastime of many a boy or girl. Take a piece of glass about a foot long and make a bridge of it by supporting each end on a book, keeping the glass about an inch above the table. Under the glass put little paper figures cut out to represent men and animals. Now if you rub the glass vigorously with a silk-handkerchief these little figures will jump from the table and cling to the under side of the glass. The reader may ask what that has to do with photography. Only

this, that the figures jump because the glass has become a form of electrified magnet by the friction, and that is just exactly what happens when a plate is "dusted" before exposure. We do not rub it so hard, and therefore it does not pick up big bits of paper; but it will pick up many little bits of dust that are always floating in the air. Platemakers always send out their plates almost free of dust, and the best plan is to see that it never gets to them. The best way to dislodge any that there may be is to give the edge of the plate a smart rap on the darkroom-bench.

Window-Portraiture

THE figure-at-the-window style of portraiture is one that has tempted photographers of all schools and periods, and particularly those specializing in home-portraiture, says *The British Journal*. Of course, the style is not an easy one owing to the fact that the lighting is not under the absolute control of the photographer, and also because it is one that tends to give strong contrasts. Much, however, may be done to improve matters by the use of suitable reflectors inside the room, and even by the aid of a magnesium-flash. The chief fault to guard against in window-portraiture is underexposure, which is especially liable to show itself owing to the subject generally having a long scale between highlights and deep shadows. For this reason also a well-backed orthochromatic plate is an essential. A backed plate of the non-screen type will reduce halation-troubles to a minimum, or a portrait-film may be used. Great care must also be taken not to overdevelop the negative. Most portraits at the window that we have seen have been made from inside the room; but there is no reason why this should always be the rule. There is no objection—given suitable surroundings—to the portrait being made from the outside. This may often prove a better point of view, and the technical difficulties of the subject certainly become less formidable on this account. Photographers who are on the lookout for something distinctive in the way of at-home portraiture may perhaps find a hint in this mention of the alternative viewpoint.

The Color of the Mount

WHEN only a narrow margin of cardboard was shown round a mounted photograph, the color and depth of tone did not greatly affect the appearance of the print, provided, of course, that vivid colors were not used. In these days, when the mount is usually much greater in area than the print, the color and depth need more careful consideration, as the common practice of using one tint of brown or gray for all prints often results in spoiling the effect of the work. There are few bromide printers who can guarantee good sepia tones from every class of negative, and much may be done to make a print look its best by using a suitable mounting-paper. Even with black and white prints the depth of tone of the mount must be studied, as a delicate pencil-like image may be made to appear washed out by placing upon a dark gray or brown, which would suit a rich print with strong contrasts. A few pieces of various colored mounting-papers, and a piece of colorless glass to keep the print flat, will enable the most suitable tint to be chosen with the minimum of trouble. A narrow tint mounted under the print sometimes helps to detach the print from the mount; but, as a general rule, such tints are not to be recommended, and they are consequently falling into disuse.—*The British Journal*.



BOOK-REVIEWS

Books reviewed in this magazine, or any others our readers may desire, will be furnished by us at the lowest market-prices. Send for our list of approved books.

PHOTOGRAMS OF THE YEAR 1919-20. The Annual Review of the World's Pictorial Photographic Work, Edited by F. J. Mortimer, F.R.P.S. 32 pages text, 84 halftone-reproductions. Price, paper-covers, \$2.00. Postage according to zone. London; Iliffe & Sons, Ltd. New York; Tennant & Ward, 103 Park Ave., American Agents.

Again, we greet the arrival of the British international annual of pictorial photography. In variety the half-tone reproductions have not been excelled by any previous issue of this deservedly popular production. Its cosmopolitan character is obvious, the pictorial contributors being distributed as follows: United States 14, Australia 7, Canada 3, India 3, Holland 3, Spain 2, Japan 2, and Italy, Belgium, Sweden, Norway, Denmark, Egypt, New Zealand and China, one each (about one-half of the total number of 84); the rest are English. Although each subject has positive artistic merit, the following ones appeal to us more strongly than others: The British Lion (frontispiece), Reginald Johnson; The Enchanted Wood, C. J. Merfield; L'Attente, Leonard Misonne; En Arcadie (design for design), Francis Jay; On the Seashore, S. W. Europe; Bruges, Charles Job; Dancers, Hugh Cecil; Mexican Boy, Louis Fleckenstein; Pandora, Yvonne Park; Looking Down (seascape), W. J. Clutterbuck; Hills of California, John Paul Edwards; The Tower, Harry Storm; The Blue Crane, George Alexander; Gasometers, Ward Muir; Dancing-Study, Waldemar Eide; A Japanese Actor, C. P. Crowther; Firing Battery, Capt. Wilkins and C. W. Bostock; The March of the Silhouettes, C. W. Christiansen; A Study in Line and Tone, Bertram Park; Symphony, J. E. Paton; The Little Boat, Richard Polak; Trades, France, T. B. Blow; Phyllis and Crinoline, Charles Borup; The Deserted Mill, J. M. Whiteside; Wind-swept, S. Bridgen; North-Westerly Storm, W. Truelsen; Sun-Flecked Columns, E. M. Pratt; Ballerina, Arthur F. Kales; His Boy in France, Rudolf Eicke-meyer; The End of the Trail, F. J. Mortimer; Coquette, Andrew Barclay; Orient, Gascoigne Lynde; The Stockman, C. E. Wakeford; On a Dutch Canal, A. G. W. Reusser; A Street in Old Cairo, J. H. Coatsworth; Epilogue, Edward Weston, and Pierrot Blanc, the Earl of Carnarvon.

The text is of unusual interest to the pictorial worker, in that Mr. Mortimer's five-page editorial, Harold Cazneaux's review of pictorial activities in Australia, W. H. Porterfield's similar effort for America, and H. B. Goodwin's for Scandinavia, as well as F. C. Tilney's illuminating Critical Causerie of eminent pictures of the year 1919, provide entertaining, instructive and dependable reading. There is also a complete list of British Photographic Societies and Postal Camera Clubs, together with days of meetings, membership fees and name and address of each secretary which constitutes a very valuable and much appreciated feature of this popular annual of photography.

Night-Effects in Daylight-Pictures

MANY interesting photographs of outdoor-scenes, in which the lighting-effects closely resemble those that we see on moonlight-nights, have been printed from negatives that were exposed when the sun was shining brightly.

A writer in *Kodakery* goes on to say that, negatives that will yield such prints can be made easily if the subject is a suitable one and the light-conditions are right.

We think of night as a period of darkness, and it is probably because of this fact that a picture will not adequately suggest night to us unless it contains more dark than light-tones.

The deep shadows in a night-scene are black, the halftones quite dark and the sky is never as brightly lighted as in the daytime. If a picture is to suggest night, it must render these tones as we see them at night; but it should also, for pictorial effect, contain some highlights. These highlights should be on the landscape instead of in the sky, and they can only be furnished by something that reflects light enough to photograph white or very light gray. Sunlight reflected from a sheet of open water, or from snow or ice, will furnish these highlights.

Sunlight is needed to give the necessary contrast between the lightest and the darkest parts of the picture, and since the strongest lights are not to be in the sky it will be necessary to use a filter for photographing the subject.

The reason why a filter must be used is because all photographic films and plates are more sensitive to blue and violet than to any other colors, and since more of the blue-violet is reflected from the sky than from the landscape it is necessary to use a filter to cut out the excess of these colors, if we wish to make a strongly-lighted sky photograph dark enough to obtain the effect needed to suggest a night-scene.

The point of view from which to make such pictures is one from which more of the dark than of the light side of the subject can be seen, and the best time to make them is at that hour of the day when the greater part of that side of the subject that is to be photographed happens to be in shadow. The noon hour is as suitable as any other, if the light-conditions are favorable at that time.

In making such pictures we must expose for the strongest lights only. This will underexpose the shadows, so that they will print black. If we expose long enough to record detail in the shadows the result will be a day and not a night-effect. Splendid results have been obtained with the K2 Filter when exposures of 1/25 of a second, and, with the Kodak Color Filter when exposures of 1/50 of a second were made, with stop 4 on rectilinear, or stop F/8 on anastigmat lenses.

With single lens cameras we would suggest an ordinary snapshot—with a Kodak Color Filter in front of the lens. If the pictures are made early in the morning or late in the afternoon, the exposures should be from two to four times as long as those stated.

Distant landscapes and all subjects that lack deep shadows are wholly unsuitable for the kind of work we have described. Typical night-effects can only be obtained in daylight-pictures of nearby subjects, in which plenty of dark tones can be seen.

Tact

"Do show me your print-portfolio, Mr. Snappum; I always enjoy looking at your photographs." You know, I don't know the first thing about pictures."



LONDON LETTER

CARINE AND WILL CADBY



Just before leaving Switzerland, we noticed that the first new book on ski-ing, published since the war, made its appearance. This is called "Cross-Country Ski-ing," is written by Mr. Arnold Lunn and published by Methuen. Mr. Lunn, who is an expert in all ski-craft, is also a pioneer in the exciting and, what seems to the uninitiated, hazardous game of high mountaineering on skis in winter. But the interest of this book to our readers lies in the photographic illustrations which are mostly made by Herrn Geiger, a professional photographer of Adelboden, Switzerland. Herr Geiger, being a skier as well as a photographer, and living in the midst of grand snow-scenery, has had exceptional opportunities to portray the ski-runner in his proper surroundings and, furthermore—being an artist at his work—has achieved some wonderful and beautiful results. To suggest *movement* in ski-running is always difficult; but Herr Geiger has surmounted the difficulty by selecting steep hills with mountainous backgrounds, and taking his photographs with the sun shining well across the tracks. Even then, success is unlikely unless the snow is new and powdery, and there are no old tracks in sight to confuse the issue. One picture in particular is of exceptional merit and beauty. In this a steep hill is shown, flanked with big, white clouds—the certain sign of a clearing storm in this country. From the very top of the hill to the forefront of the picture, two graceful, single-furrow tracks are seen, and a third is actually being made by a skier who, halfway down the slope, and traveling at great speed, is throwing high behind him a cloud of "pulver-schnee." No ski-ing picture that we have seen so well represents the rhythm, the velocity, and yet serenity and beauty of the sport, and, at the same time, explains so much that is inexplicable to those who have not had the opportunity to see ski-ing at its best. Only a focal-plane shutter, set at its fastest, can represent faithfully such a rapidly moving subject, and luckily the environment of such pictures is so light—being high up amongst snow-mountains—that even the most rapid of exposures is sufficient to give ample quality and detail in the surrounding view.

All the big business-houses seem to start magazines devoted either to the particular trade to which they belong, or to the doings of the employees of the firm. We have long been familiar with the paper called "Delectaland," issued by the Delecta cocoa people; and Lyons, the great caterers, have just started "The Lyons Mail," in which one may read of the recreations of their army of workers. All these house-organs are profusely illustrated with photographs. Kodak's "Professional Photographer" is, of course, of old standing and has a position all its own. But the latest addition to the list comes from the well-known British photographic firm of Houghtons, Ltd. of London and Glasgow, and has as its title, *Houghton's Professional Bulletin*. It is to be issued monthly, and the first copy is dated February, 1920. Messrs. Houghton have evidently realized that the prices of photographic materials at present vary almost from day to day, and are as fluid as the exchange rate between the different countries. Hence they have devised a method of keeping their customers in touch with current prices, which would be obsolete before they ever saw the light in a big

yearly price-list. In their introduction, they describe the *Bulletin* as "a sort of monthly traveler that gives you the news of what is going on." It also directs attention to novelties the firm is introducing, and has a list of current prices of chemicals, etc. With all the uncertainties of present-day prices, and the even greater uncertainty as to whether it is possible to procure the goods at any price, there should be room for so useful and informative a little magazine.

We regret to have to record a rise in the price of British photographic plates since we have been abroad. The marder-plate size ($4\frac{1}{4} \times 3\frac{1}{4}$ in.) which, years ago, cost only one shilling a dozen, is now priced at 3/6. The Imperial Plate Company has taken to packing even so small a size as $3\frac{1}{2} \times 2\frac{1}{2}$ in. in boxes of half a dozen plates. This is quite an innovation, and is, of course, the direct result of high prices. The worst of it is that it makes the cost even higher still, as naturally an extra charge has to be made on the smaller quantity. We had occasion to order some plates while in Switzerland, and noticed that there were none but English varieties to be had. When discussing some photographic matter with the Swiss shop-assistant, he proved his point by an easy reference to the *British Journal Almanac*, with which he was perfectly familiar. So British photographic goods, at least in Switzerland, are to the front.

However dormant photographic energies are in the winter, they are sure to stir again in the spring. And it is not only that the light is more encouraging for photographic work, but all kinds of things seem possible with the passing of winter's gloom. The Professional Photographers' Association is taking advantage of the rising of the sap of photographic energy, and has arranged to hold a big and important Congress and Exhibition, in April. During these last years, this dogged Association has just kept its members together and marked time; but last year it began its activities, and this spring it is gathering impetus to become a power in the photographic world, and is being much discussed just at present.

As this Congress will take place in London, the Association has recognized the congested state of our capital, and has commissioned Messrs. Cook & Son to find rooms for the visitors from the provinces. Spending a night in London, nowadays, is a problem; but on our return through France, at the beginning of the French railway-strike, we found that, compared to Paris, London was uncrowded and hospitable.

The Exhibition, or rather Photographic Fair as it is called, will be held at the Royal Horticultural Hall at Westminster, and we can write more fully of this after we have seen it. The Congress will be running from April 19 to 23, and it is intended by the Council of the Association to make it the meeting-place and Parliament of professional photographers of the whole kingdom. An interesting program of lectures has been arranged for four evenings. We are particularly eager to hear Mr. Herbert Lambert's lantern-lecture on Modern Methods of Portraiture. Mr. Lambert has gone ahead lately at a remarkable rate, and his six exhibits in last year's Salon show that, in spite of the handicap of his professional work, he has acquired

(Continued on next page)



RECENT PHOTO-PATENTS

Reported by NORMAN T. WHITAKER



THE following patents are reported exclusively for PHOTO-ERA MAGAZINE from the patent-law offices of Norman T. Whitaker, Whitaker Building, Washington, D. C., from whom copies of any one of the patents may be obtained by sending fifteen cents in stamps. The patents mentioned below were issued from the United States Patent Office during the month of February, the last issues of which have been disclosed to the public.

No. 1,331,092, Colored Photographic Images and Method of Producing the Same, issued to Jesse M. Blaney, Verona, N. J., assignor by mesne assignments to Prisma Incorporated, a Corporation of Maine.

Focusing-Finder, No. 1,331,269, issued to George Samuel Lalin, Rasunda, Sweden.

William Burton Westcott, Wellesley, Mass., has been issued patent, No. 1,331,174, Lens-Mount, and has assigned the same to Kalmus, Comstock & Westcott Incorporated, Boston, Mass., a corporation of Massachusetts.

No. 1,329,088, Process of Making Printing-Plates, has been issued to Emil Lietner, Hoboken, N. J., assignor to Powers Photo-Engraving Company, New York, N. Y., a corporation of New York.

Roll-Film or Similar Camera for Color-Photography, No. 1,330,535, has been issued to Henry Hess, Philadelphia, Pa., assignor to Hess-Ives, Incorporated, Philadelphia, Pa., a corporation of Virginia.

Augustus G. Boxell of Los Angeles, Calif., has been issued patent, No. 1,330,235, for Recording Plateholder.

No. 1,330,400 issued to David A. Sine, of Greece, N. Y., for Camera.

Reissue patent, No. 14,802, for Lithographic Plate or Offset and Direct Printing, to Jacob Grass, Fulham, London, England.

Roll-Film, patent, No. 1,329,785, has been issued to Arthur W. McCurdy of Victoria, British Columbia, Canada.

John H. Klenck of Warren, Pa., has procured patent, No. 1,329,715, for Camera-Shutter.

No. 1,329,424, for Multiple-Aperture Shutter, has been issued to Paul J. Marks of Rochester, New York, and is assigned to Eastman Kodak Company, Rochester, N. Y., a corporation of New York.

Subterranean Camera, patent, No. 1,331,627, issued to John B. Dilts of Paul, Idaho.

Myron B. Gordon of Wilksburg, Pa.; assignor to Ansco Company, Binghamton, N. Y., a corporation of the State of New York; has been granted patent for Automatic Film-Winding Camera; patent, No. 1,331,848.

No. 1,331,949, Automatic Film-Winding Camera, issued to Myron B. Gordon, Wilksburg, Pa., assignor to Ansco Company, Binghamton, N. Y., a corporation of New York.

Film and Shutter Controlling Device for Cameras, Patent, No. 1,331,832, Andrew H. Roikjer, Boise, Idaho.

George J. Fallesen and Walter L. Farley of Rochester, N. Y., assignors to Eastman Kodak Company, Rochester, N. Y., have invented "A Roll and Fastening Means Therefor." Patent, number 1,332,890.

An "Apparatus for Washing Prints and the Like"

has been patented by Peter H. Waddell of Troon, Scotland. Patent, number 1,332,965.

Patent, number re-issue 14,821, has been issued to Lewis W. Chubb, Edgewood Park, Pa., on a "Device for producing Polar Oscillograms," assignor to Westinghouse Electric and Manufacturing Company.

Walter T. Oxley of Fergus Falls, Minn., has also assigned his patent to the Eastman Kodak Company, Rochester, N. Y. His patent number is 1,332,854, a "Photographic Printing Machine."

Max Handschiagl of Los Angeles, California, has invented a "Film Polishing Machine." Patent number is 1,334,655.

Patent, number 1,333,041, has been issued to Benjamin A. Slocum, of Rochester, N. Y., on a "Photographic Shutter."

Another patentee from Los Angeles, California, is Masaji Horie who has received patent, number 1,333,918, on a "Camera Self-Timer."

The London Letter

(Continued from the preceding page)

a position among the foremost pictorial portraitists in this country. In his lecture, he is showing some lantern-slides among which are some of our own child-studies. We offered Mr. Lambert the loan of some negatives; but he preferred to make his slides from the actual prints, and he has promised us we shall see some of the "quality" that he admires in our work reproduced on the screen. It is an interesting and difficult experiment, and we greatly anticipate seeing the results. We shall probably have another opportunity to see our work on the screen during the Congress, for Messrs. Kodak are giving a demonstration on "The Use of Flat Films in Place of Glass Plates" on the afternoon of April 23. On our recent trip to Switzerland, we carried nothing but these flat films on account of weight and the relatively small space they take up compared with glass plates, and it will be amusing to see these Swiss scenes reproduced in London.

Amongst the many other attractions, there will be a public exhibition of photographs illustrating the present position of professional photography in the United Kingdom. Mr. R. N. Speaight, the well-known professional child-photographer, of New Bond Street, has this section in hand, and it is sure to be full of interest to amateurs as well as to the trade.



Every Editor Has His Troubles

HE called his typist to his office. "Miss Keytap, you dress neatly and you have a well modulated voice. I might add that your department is also above reproach."

"You shouldn't pay me so many compliments."

"I only want to put you in a cheerful frame of mind before taking up the matter of your spelling and punctuation."—*Boston Globe*.



WITH THE TRADE



C. P. Goerz American Optical Company Sold

THE German ownership of the C. P. Goerz American Optical Company consisting of 549 shares of its common stock out of a total of 600 shares, together with all its photographic patents, tradenames and other valuable concessions, was sold by the Alien Property Custodian on March 5, 1920, to a syndicate of Boston financiers, composed mainly of members of two important banking-houses.

The office and factory of the company will continue to be maintained as previously at 317 East 34th Street, New York City, and the company proposes to continue the manufacture of photographic lenses of the highest quality, as an American enterprise entirely.

A force of highly skilled workers, together with the same supervising staff of experts with their many years of practical experience in the making of anastigmat lenses, and under the management of Mr. Fred Schmid who has been connected with the company in executive positions for twenty years, will give full assurance that the Standard of Quality of the celebrated Goerz Lenses will be fully maintained.

The demand for Goerz lenses continues to be very strong, and the present facilities of the factory are taxed considerably to meet the urgent demand. The company has lately succeeded, however, in furnishing the well-known Goerz Dagor, Dognar and Hypar lenses in fairly good quantities, and there is every prospect that the volume of production of the many different types of lenses will soon be greatly increased. The prospects of a healthy growth of the company seem very bright, and we may look forward to an increased activity of the company in the near future.

Portrait-Lenses Wanted

THE A. T. Thompson and Company, 15 Tremont Place, Boston, Mass., is in need of portrait- and projection-lenses as announced in the advertising-pages of this issue. We understand that this company is willing to pay a high cash price for lenses that are in good order and that meet projection-requirements. Photographers should avail themselves of this excellent opportunity to dispose of their unused lenses.

A New Camera Exchange

We are informed by Mr. Benjamin Chimberoff, manager of the Camera Exchange, 120 South State Street, Room 70, Chicago, that this new mail-order camera-house specializes in high-grade used apparatus. Equipments of every description are bought, sold and exchanged. Every camera and lens is guaranteed and is sold under a ten-day free-trial guaranty. A new bargain-list—just issued—should be in the hands of interested camera-users. Every interested camera-user should have a copy.

A. Madeline Moves to Broadway

For several years, the well-known importer, A. Madeline, has been situated at 503 Fifth Avenue, New York City. Increased business has made a change

necessary, and Mr. Madeline's new quarters will be at 1416 Broadway, opposite the Metropolitan Opera House. A complete line of high-grade apparatus may be inspected and is always kept in stock.

Autochromes More Popular Than Ever

No method of color-photography is more popular than the well-known Autochrome process. We learn from Mr. R. J. Fitzsimons, 75 Fifth Avenue, New York City—importer of the famous Lumière products—that he is now able to fill all orders promptly. In addition to Autochrome plates, Mr. Fitzsimons carries a complete line of Richard Verascopes, Glyphoscopes, Taxiphotes, Stereoscopes and all Stereoscopic Materials. Correspondence is solicited and will receive prompt attention.

Devoc & Reynolds Company

ONE of the oldest manufacturers of paints, pigments and colors, in the United States is the well-known firm of Devoc & Reynolds Company, 101 Fulton Street, New York City. This company was founded in 1754 and its products have achieved a widespread reputation for excellence. Devoc's Photo-Oil-Colors are especially adapted to the requirements of amateur and professional photographers.

An Explicit Announcement

A NEWSPAPER in the middle west contained the following carefully prepared announcement of a local photo-finisher:

PASTE THIS IN YOUR HAT

As I am working for Mr. C. K. Schantz, I will not be at home in the day time except on Sunday. If the shade on the front door is down I am not at home, if the shade is raised I am at home, and you may come in and welcome. Persons in the country wishing to have films developed or pictures made may leave them at Boshart Bros. store if I am not at home. I will be in town every evening at 6 o'clock. Any one wishing work done may call after that hour. When you open the door a bell will ring. If I do not come in at once you will know I am busy in the darkroom and cannot leave my work. Meanwhile be seated, I will be in a few minutes. Parties wishing to call me in regard to work will please call No. 190 between 7 and 11 p.m. After that time I will probably not hear the phone and have nobody to wake me up. Andrew Schantz, Wayland Kodak Finisher.

A Soft-Focus Tale

"I don't know whether I like these pictures or not," said the young woman. "They seem rather indistinct."

"But you must remember, madam," said the wily photographer, "that your face is not at all plain." She took the prints.

Work of Reference and Art-Album



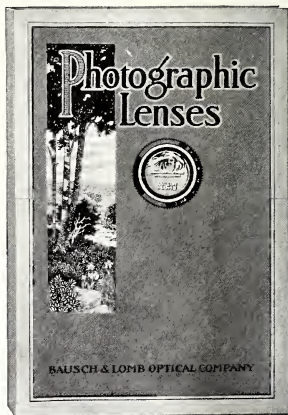
in one volume. That is what the new catalog of

Bausch & Lomb Anastigmat Lenses

amounts to. Just from the press, with new illustrations throughout, it will excite the admiration of all lovers of artistic printing and book-making. It is also significant as the first complete catalog of this line which we have been able to publish since before the war.

The publication contains a fund of technical and practical information regarding photographic terms, optical properties of lenses, advice as to the most suitable lens-equipment for the various types of photography, and a liberal assortment of specimen photographic reproductions.

Then there are complete descriptions, illustrations and latest prices of our famous Tessar Ic and Iib lenses for reflecting- and hand-cameras, respectively, our Protar Convertible Series for all-around photography and our Series IV and V for wide-angle work—also our new Process Anastigmat for both black-and-white and color-work, presented here for the first time, our Telephoto-Attachment and other accessories.



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PHOTO-ERA the Blue-Book of Photographic Advertising



STILL-LIFE

A. P. MILNE

SEVENTH PITTSBURGH SALON

PHOTO-ERA

The American Journal of Photography

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No. 6

The 1920 Pittsburgh Salon

M. C. RYPINSKI



WHAT are the tendencies of the 1920 Pittsburgh Salon? To this question the writer of this article addressed himself in attempting to bring to the readers of the PHOTO-ERA a helpful view of this important pictorial event.

Portraits and figure-studies predominate with a sprinkling of still-life and pastoral subjects. The straining after immensity, after orientalism and heathen mythological effects is happily diminishing and simple, pure and beautiful concepts are taking their place. This is a sign of growth and development—the development of real art, and it promises much in the way of the recognition of pictorial photography as filling a real place in the graphic arts. Pictorial photography, in order to be properly recognized, must establish itself as useful in decoration and its masterpieces must defy time as do those of the school of painting.

A hopeful and significant feature of the Seventh Pittsburgh Salon is the unusual number of pictures which have been sold to the public. When one is able to make a picture for which some one else is willing to pay a substantial sum to hang in his home, then it must be said of such a pictorial photographer that he is a recognized artist.

It is hardly just to attempt, in a few words, to present adequately a detailed review of the Seventh Pittsburgh Salon; but the Editor is insistent, so here goes.

The battlefields of France which now seem things of the distant past are brought back vividly to mind by Fred Archer's five pictures of that sunny clime, although his aspect of France is necessarily somber. Elizabeth R. Allen of Moorestown, N.J., shows a lovely bit of woodland-interior with sunlight and shadow. Mr. Christiansen of Chicago in two of his four pictures, namely "Creation" and "The Majesty

of Pico Heights," evidences a distinct falling away from the impressionistic school and a trend toward naturalism. Wayne Albee of Seattle, a new contributor to the Pittsburgh Salon, is a worker of promise. His "The Harbor" is very nicely done; but his other four pictures are better in concept and technique than in setting. Wm. A. Alcock of New York has two exteriors made at night which are excellent in poetic feeling. A decorative bird-study, "The White Egret," by George Alexander of Chicago, is a striking gum well handled through a wide range of tones and distinctively Japanese in feeling.

Snow in all its soft, white mantling simplicity is beautifully portrayed in John Wallace Gillies' "Winter." Action and feeling mark the picture "Street Menders" by G. M. Allen of Portland, Ore. "Winter on the Farm," by C. J. Crary of Warren, Pa., shows an unusual grasp of composition and pattern. He succeeds in transforming a bleak lonely landscape into a picture of decorative beauty. Mr. F. Bauer, of San Francisco, depicts the female figure with grace and poetic feeling in three of his six studies. His "Benediction of Night," a dyed print in greenish blue, is very well rendered. "Youth and Industry," by Chas. K. Archer of Pittsburgh, is a juxtaposed study, as its title indicated, of the duo-buoyant youth and throbbing industry. "A Corner of the Palace of Fine Arts," by P. Douglas Anderson of San Francisco, is worthy of mention, but would have been improved by rendering the sky in lower key. A bright bit of landscape is "Summertime," by David W. Bonnar of Buffalo.

John Paul Edwards is represented by four interesting studies as follows: "On the Dunes at Carmel" is delicate in texture and feeling, but lacks consistency in its planes and has a weak foreground. "A Cypress of Monterey" is strong and virile. The pastoral "Valley of Carmel" is a delightful departure from his usual



PRINCESS OJIRA

FORD STERLING

SEVENTH PITTSBURGH SALON

vein. "The Fallen Brother," depicting two cypress trees by the sea, one fallen against the other, is excellent in feeling and treatment. "Sunshine and Ripples," a beautiful child-study by A. D. Brittingham of Bridgeport, Conn., has a distinct appeal. A. D. Chaffee, the inimitable worker in Bromoil, is represented by five prints. In "Salers, Cantal" and "Münstereifel, Rheinland" is portrayed shade in mass in distinctive compelling fashion, and "Le Puy, Haute Loire," overwhelms one with its masterful technique and composition. Chaffee, in newer, lighter vein is revealed in the water-scene, "Polpero, Cornwall, Early Morning," and the seascape, "Port-en-Bessin, Normandy," is charmingly and faithfully recorded. Edgar R. Cate, of Pittsburgh, in his "Cofferdam," has succeeded in reducing an unusually complicated subject to a picture of interest and vitality. R. M. Coit's two gum-prints, "Fishermen's Huts," and "Noank, Connecticut," are very pleasing in composition, but a trifle heavy in treatment.

Louis Fleckenstein, of Los Angeles, has five prints—four of them typical Fleckenstein figures. One likes "The Girl from Delhi" and "Beth Beri." Portraiture—chaste and classic—is Alice Boughton's forte. She has four prints, all excellent. Dwight A. Davis' "Still-Life" is nicely balanced and illustrative. Mrs. Charles Hayden of Catonsville, Md., is a worker of quiet, delicate feeling. Her "River" is an exquisite bit. "Evening," a gum by Thomas M. Jarrett, of Pittsburgh, reveals a new worker of promise. The spirit of Pittsburgh's chief industry is feelingly portrayed in two prints by Mr. Gillilan. Louis A. Goetz of Berkeley is a consistent contributor to the Salon. His "Nebula" is a graceful, but somewhat meaningless nude. G. Buell and Hebe Hollister, Corning, N.Y., have two large prints nicely executed, one an interesting marine and the other a study of two children bending over a fountain. "The Sunlit Window," by O. E. Fischer of Detroit, is extremely simple, but excellent.



PORTRAIT OF COUNSELOR L.
KARL TAUSSIG
SEVENTH PITTSBURGH SALON



A VISTA OF LAKE AND HILLS

W. H. PORTERFIELD

SEVENTH PITTSBURGH SALON

Rupert S. Lovejoy masterfully portrays mist and military movement at dawn in "Between the Lines." "The Adventurer," by F. O. Libby, is epic and herculeanean, but the little sailing-vessel is almost lost in the vista. "Fifty Years," a contrast of building architecture, one of Frederick Frittita's five prints, is interesting and decorative.

Arthur F. Kales, of Los Angeles, never fails to please in expressing delicate grace and action. His four prints, "Ballerina," "Finale," "In the Temple of the Sun" and "Frieze," are among the best in the Salon. A fine character-study is "Micky," by Arthur S. Little, of Los Angeles. Margrethe Mather essays two charmingly decorative bits of still-life, "Black Acacia" and "Pointed Pines," and two figure-studies, "Claire" and "Eugenia Buyko," all of which are in her usual splendid vein. "An Adobe in California," by Oscar Maurer, is worthy of mention. Alexander P. Milne, of New York, a worker superb

in technique and rendering on tonal quality, is represented by four figures and two compositions in still-life. Friend Porterfield is represented by six prints, some unmistakably Porterfieldian. One is in some doubt as to whether continued expression of unmistakable individuality does not denote genius in "Statu Quo." These last remarks do not apply to his "Vista of Lake and Hill," which is beautifully expressive. "Mount Olympus," by L. A. Olsen, of Salt Lake City, is a striking and brilliant snow-vista. His "Daughter of Omar" is also worthy of mention. "Labour," by Peter G. Petridis, of Detroit, reveals a beginner of much promise. "Still-Life," by Lynn T. Morgan, New York, deserves notice.

E. M. Pratt, of Los Angeles, has an interesting decorative print, "City Beyond." Remick Neeson has five good prints, two of which are still-life carbons of splendid quality. Dr. Jaeger's two marines are excellent, though small for exhibition-purposes. Two soft and pleasing



THE RIVER

EMILY H. HAYDEN

SEVENTH PITTSBURGH SALON

child-portraits are "John" and "Elinore," by Helen Lohmann of New York. "Alone," a beautifully poetic carbon by H. W. Schonewolf, of Buffalo, is one of the best pictures.

Mr. John H. Stocksdale, of Baltimore, shows us four examples of his work. Composition and treatment are excellent. Dr. Ruzicka surpasses one of his 1919 Salon efforts in his "Temple of Commerce"—a very beautiful architectural study. Thos. O. Sheckell's two prints, "Sentinels of Night" and "Foothills of the Wasatch," are feelingly executed. Ford Sterling continues to demonstrate genius and growth in his six prints, "Stairway to Romance," "Muse," "Vampire," "Temple Dancer," "In Shadowland," and "Princess of Ojira." The last two show a new trend in his work—toward the simple and natural.

From England we have three fine prints in carbon, the work of H. Y. Simmons. "Ripe Unto Harvest" has a decided feeling of Millet, and is his best. The force and breadth of the picture are impressive to a degree that one does

not, for some time, if at all, consider the means—the brains and the skill—that gave it pictorial value. Karl Taussig, of New York, has in his portraits, "Counselor L." and "Daniel," two splendid character-studies of excellent quality. Edward Weston's interesting pictures, "Silhouette" and "Margrethe Mather," are typically Weston. One of the best things that untiring worker N. S. Wooldridge has shown recently is the woodland-scene, "Bird-Music." He has three others to his credit, all of which are carbons. "Gnarled," by Ernest Williams, of Los Angeles, is very beautiful in tonal quality; the composition shows at once the war of the elements and the peace of evening—conflicting. "De Profundis," by Otis Williams, of Los Angeles, is decorative, well-composed and exceedingly interesting.

A few of the regular contributors are missing this season, owing to the unsettled conditions of the time through which we are passing. Some are reported in foreign lands, others sojourning

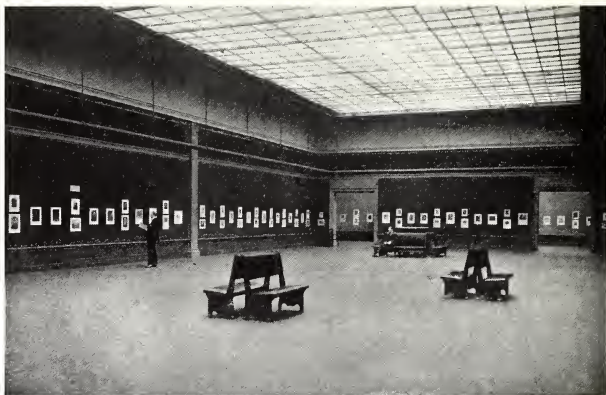
in distant parts of our country for recreation and recuperation. We will look forward with pleasure to having them back with us next year. The interest shown has been greater than ever this year. The daily attendance has also been large, including visitors from all parts of the country.

The daily press printed complimentary notices, one of which, by *The Pittsburgh Sun*, is reprinted herewith.

"That photography is entitled to consideration as a fine art is evidenced by the character of the prints hung in the salon which the Academy of Science and Art is holding in the Carnegie Institute. Important as are the mechanical

is revealed in the Pittsburgh Salon. Sharpness of definition can be avoided through what is known as 'soft focus'; and even from sharp negatives diffusion, or a softening of the lines, is obtainable through the new process of printing.

"Photography is only in its infancy. The strides forward are earnest of what may be expected in the future. The standardized lightings with which all portraits were made a few years ago are already a thing of the past, found only in the cheap postcard-studios. Motion-pictures, which are photographs projected on a screen in quick succession, show constant development in the art. It is notable



EXHIBITION-ROOM

SEVENTH PITTSBURGH SALON

processes involved in the making of these pictures, it is apparent that however skilful one may be in exposing and developing the plate and printing the photograph, something additional is needed to win a place in the Pittsburgh Salon. The prime essential is an artistic sense, which finds expression in the selection of the subject, the arrangement, composition and balance.

"One has heard paintings criticized on the ground that the painter's eye was like a lens and that everything within its scope was depicted on the canvas with too much exactness of detail, leaving nothing to the imagination. The opposite trend is found in the work of the impressionist school, more especially in the extreme examples of futurism. That the photograph as well as the painting is adapted to impressionism

that six of the two hundred and thirty-eight photographs found worthy of being exhibited in the local salon are the work of a popular comedian of the 'movies.'

"The widespread interest in motion-pictures is making the people appreciative of the artistic in photographs. This will tend to promote good taste in the judgment of still pictures such as are displayed in the Carnegie art-galleries. Pittsburgh's annual Salon of Photography is the best in the country, the one held at Los Angeles being the only other one that approaches ours in merit. The exhibition reflects credit on the city. It should be visited by those who appreciate art as well as those interested in the progress made by photography. The Academy of Science and Art is to be congratulated."



RAPE UNTO THE HARVEST

SEVENTH PITTSBURGH SALON

H. V. SIMMONS



THE VALLEY OF CARMEL

SEVENTH PITTSBURGH SALON

JOHN PAUL EDWARDS

Reflecting-Cameras



ALTHOUGH most of our readers can decide for themselves the personal need of a camera of the reflecting type, there are still many who, attracted by the apparent ease with which this style of camera is operated, wish to own one, but hesitate to make the plunge. Such workers will be interested to read the following impartial sketch of the advantages and disadvantages of reflecting-cameras, by "Theta" in *The Amateur Photographer*. It may enable an intending purchaser to decide whether the reflecting-camera or one of another type would best meet his particular requirements.

No other camera can compare with one of the reflex-type for dealing with certain classes of subjects; and wherever it is important to focus accurately, and yet to obtain the other advantages of a hand-camera, the reflex is essential. For example, when a very rapid lens is to be used, especially if it is one of long focus, focusing by scale breaks down. It is not that we may not be able to estimate the distance of some part of the subject, or that we cannot set the scale correctly to that distance—it is that when we are working with such instruments this is not sufficient. The whole of the subject does not lie in one plane; we have to focus so as to get the best general effect, and whenever this has to be done, there is no help for it, we must actually see the image on the groundglass, and adjust the focus accordingly. This is where the reflex is so valuable—possessing, as it does, qualities which it shares with the tripod-camera, alone.

In photography, however, we can get no advantage without having to pay for it in some way, and not in money only. The reflex is necessarily expensive; it is also bulky, heavy, and has other limitations. With a very short-focus lens, it may be impossible to get the lens near enough to the plate without fouling the mirror-mechanism; the extent to which the rising-front can be utilized is often unavoidably limited; with lenses of long focus and requiring long extension, the whole of the image may not be seen on the groundglass or the mirror-fitting may cut off some of it from the plate; finally, with most patterns one is almost compelled to work with the lens at about the level of the waist, thus getting a viewpoint which, for some subjects, is very evidently too low. It is only fair to mention that, as far as this last point is concerned, the reflex does not stand alone; most hand-cameras are used at too low a level. The direct-vision finder, by compelling the

photographer to hold up his camera to his eye, does a very useful work in this connection.

The reflex-camera is rightly regarded as the instrument *par excellence* for the serious worker. As a friend remarked in our hearing, "You're bound to be serious when you have to haul about a great heavy box of tricks with half-a-dozen double-backs."

The first and greatest advantage it gives is the power to arrange the subject on the focusing-screen while viewing it the right way up. Even the tripod-camera does not give us this.

Then there is the power to focus and see the effect of each movement of the focusing-screw; this the reflex shares with the tripod-camera. Differential focusing, if it is to be anything but mere haphazard guesswork, must be done in this way, and no other; it is not possible to do it with a focusing-scale alone. One must remember that it not only involves the exercise of careful judgment as to the exact position of the focusing; but, in most cases, judgment in selecting the particular opening of the lens which will give the effect that is wanted.

Many who have not used a reflex would give, as one of its advantages, the power to focus up to the very moment of exposure; but when one comes to work with it, this is soon found to have its limits. The focusing can be done up to a much later point than with a tripod-camera, as the time of setting the shutter, removing the groundglass, inserting the plateholder, and drawing its slide, are all saved; but if a successful picture of a rapidly moving object is to be made, it does not do to defer the focusing until the latest second. When that point is reached, it is essential that all one's attention shall be concentrated upon the finder, so as to be able to liberate the shutter at just the right instant; and any attempt to combine this with focusing will almost surely mean failure. The reflex in this has a great pull, it is true, but it does not do to overestimate it; and the usual plan followed by the reflex-worker is to focus on some pre-determined point which the moving object will reach and, when it does reach it, to liberate the shutter.

When using any reflex-camera for the first time, the photographer is bound to find the shutter very noisy. Some of the beautifully made diaphragm-shutters fitted to cameras of other types are so silent, that one has to look at the shutter to see if it has gone off. There is never any necessity to do this with a reflex. Different makes vary a good deal in their noisiness, and vary, too, at different speeds; but there

is necessarily some noise where there is so much to be moved, starting suddenly, and stopping suddenly. On a light pocket-camera, this heavy movement would be apt to give rise to blurring of the image; but the weight of the reflex is, in this respect, an advantage. We do not suppose any more negatives are spoiled from shake with this pattern than with any other.

In fact, with reasonable care, a reflex is not only a pattern for the advanced worker, but it is surprisingly easy in the hands of the beginner. It needs care and commonsense, of course; for it must be remembered that there must inevitably be a jar of some kind just at the point when a jar is most likely to do harm, viz., when the mirror has been raised and the shutter is being released. Bearing this in mind and taking care to give a perfectly regular pressure upon the button, from the beginning of its movement to the end, the jar will not show in the negative. Any shake at the closing of the shutter is too late to do any harm.

It is a limitation upon one's powers to have a reflex, the slowest graduation on the shutter of which is not much longer than $1/32$ second; because it is always the slower exposures which are most useful. For one subject which is properly exposed at $1/32$ second, we shall find a dozen or more which would be all the better for $1/16$ second or even $1/10$ second. The fact that with a reflex one can use with success larger

apertures than are generally practicable with cameras provided with a focusing-scale, to some extent minimizes the inconvenience; as does also the fact that with the slowest exposures the slit in the roller-blind is at its widest, and therefore the shutter is working most efficiently. But the old hand appreciates a slow shutter as highly as the novice does one which is graduated—in a spirit of hope—up to the two-thousandth part of a second.

For high-speed work, the reflex is particularly suitable; not only because a high shutter speed is more easily obtained with a shutter of the roller-blind focal-plane type than with any other; but because of the large-aperture lenses which can be used. When such a lens is used, however, with the shutter-slit closed up to the narrowest, it is not to be supposed that the shutter is working at a high efficiency, as it is with a wide slit. This is particularly true in the case of cameras in which the surface of the plate is not as close as possible to the traveling-blind.

In thus giving a review of the advantages and disadvantages of the reflex, we have tried to abstain from doing so either as an advocate or as an opponent. It is in many circumstances a most valuable tool. It has undeniable drawbacks also, as, indeed, has every type of camera. It must be for the individual user to decide for himself how far the one counterbalances the others in the circumstances of his particular case.



THE FAMILY-GROUP

DAISIE B. CHAPPELL

The Camera Club and Civic Improvements

LOUIS F. BUCHER



NOW many of us have ever thought that a camera club or a society could be of any other use than as a meeting-place for those imbued with the spirit of photography and as a place filled with photographic equipment? Perhaps, the last thing to be associated with the camera clubs is civic improvements. In fact, camera clubs—and by such reference I mean societies also—have, in the past, been greatly misunderstood by the uninitiated. To my knowledge, the opinion of the outside is that one must be proficient in the art and science of photography to become eligible for membership. The thought that a camera club could be of use in civic improvement has been more than many would believe. Each and every camera club, however, can take a hand in matters pertaining to its own municipality, as the following account will show.

In the first place, one must not think any society too small or, on the contrary, too large to be of service to the city or town in which it may be. Of course, the proper spirit of good-fellowship and co-operation must be manifest in the organization, or the mightiest endeavor will count for naught. Without these two features, little can be accomplished in club-progress, let alone any effort to aid the community.

The mention of but a few clubs in this article is due to the limitation of the writer's knowledge as to the activities of other clubs. If other clubs have taken part in civic improvement, they are to be congratulated by this forward step. The Grand Rapids Camera Club deserves especial mention for its print-exhibition in the Ryerson Library Building, in 1919, at which time there were shown views of "Beautiful Grand Rapids"—certainly, in the interest of the city and, therefore, civic improvement. It no doubt brought many citizens and visitors to realize the picturesque spots of the city. Many views, perhaps, had never been seen by some, and others had not even known of the beauties that existed within the city-limits.

The traveling-exhibits of the Pictorial Photographers of America, shown at libraries and art-museums, is another step forward and much appreciated by the public as attendance-records show. In these exhibitions, whether by the Pictorial Photographers of America, the Associated Camera Clubs of America, or individual clubs, the public has a means to become more familiar with art as expressed through the me-

dium of the camera. It is civic improvement in another form. The Salons of Pittsburgh, Los Angeles, Portland (Maine), and others are all vehicles of another type. We cannot all, however, conduct a Salon, but there are many fields to be cultivated, and each should follow that best suited to existing conditions.

The following are told as the experiences under this subject of the Newark Camera Club, with which the writer has been closely associated for several years and is, therefore, in a position to discuss. The first real part that the Newark Camera Club took in civic matters was in 1916 at the time of the celebration of the 250th anniversary of the settling by Robert Treat and his followers on the shores of the Passaic, in 1666. The committee of two hundred and fifty were desirous to obtain unusual photographs of the decorations, parades, floats, pageants and other happenings which were to take place during the glorifications. The club, therefore, offered the services of its seventy-five members, and a committee of the club was appointed to act with the main organization. An open contest was arranged to consist of several classes, with medals for each class and a loving-cup, presented by the late Governor Franklin Murphy, for the best picture in the entire competition. It is a certainty that every float in the parades was snapped, not to speak of the decorations, unveiling of monuments, and other episodes. Possibly, the only thing not snapped, was the noise of the whistles on the opening day. The result of the contest was some two hundred and fifty pictures, which were exhibited at the Public Library.

At a later date, another print-exhibit was arranged for display at the Public Library, and was scheduled for two weeks, but was continued, at the request of the librarian, for one month. It was viewed by over three thousand persons. During the War, the club organized at the instance of the late Don S. Gates, as what was known as the Red Triangle Camera Club. The independent club was formed in order to avoid the payment of dues by those non-members of the club who volunteered for this work. We attempted, and succeeded to a great extent, in following out our motto, "A Picture of Home to Every Soldier Overseas," from Newark and vicinity. This was no small undertaking, particularly as there were a number of men in service whose parents knew little of the "America" language, and interpreters were frequently necessary. With each picture, a letter of cheer was

sent, and all without expense other than to our workers. The enthusiasm ran so high, that one member took advantage of a large gathering caused by a press-photographer making views of a parade composed of the "Folks" for display "Over There," and by setting up his outfit let his object become known. One can readily imagine what followed when the news spread that pictures were being made without cost and sent to the boys. It became necessary for the worker to call his wife to his aid in taking down the names and military addresses of the boys, together with a brief description of those in the picture for identification-purposes, so that the works would not get jammed. The result was a good day's work, and ended only by a sudden exhaustion of supplies.

The Red Triangle Camera Club work called for considerable tact and perseverance, especially among the families of foreign extraction. Although interpreters were furnished and no charge was made to either the family or the boys, our representatives were often mistaken for secret-service men, penny-photographers and anything imaginable. Where an intimate family-picture could not be secured, a view of the street, house or some other scene that might appeal was photographed and sent. The names were obtained from the Draft-Boards and Overseas announcements in the papers. The great numbers of unsolicited letters of appreciation from the boys amply testified to the success of the bit we were endeavoring to do. The Welcome Home Parades came next, and members of the Newark Camera Club were privileged to come and go everywhere, the local press and city-officials being glad of the opportunity to secure pictures of unusual interest and record.

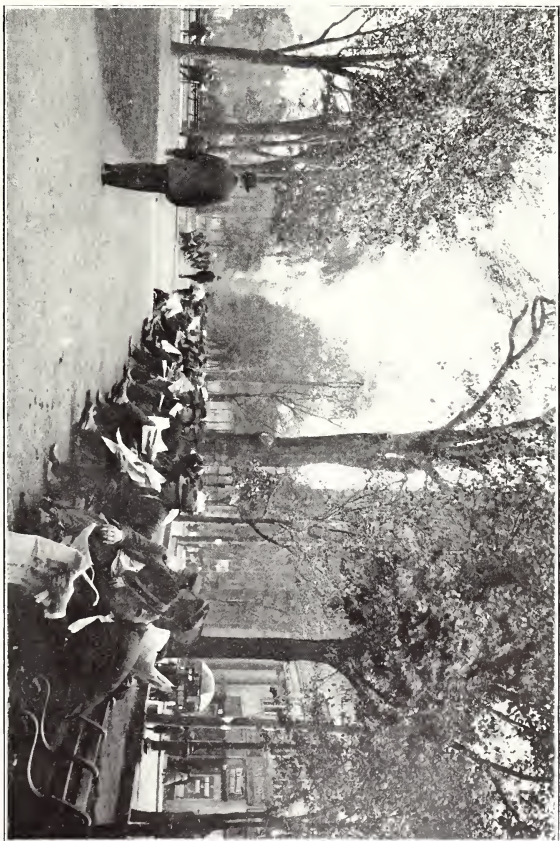
In what way could photography adapt itself more fittingly than to illustrate the report of the accomplishments of the Shade-Tree Commission of a city? It required only a request from Mr. Carl Bannwart, superintendent of the Shade-Tree Commission, for the members of the Newark Camera Club to busy themselves in the month of August to provide him with sufficient pictures of shade-trees for use in illustrating the annual report. No special assignments were made. It was just a case of good pictures being wanted for reproduction by September one, and the committee headed by R. B. M. Taylor—or Rabamat, as he is known to some of us—had no trouble to obtain more than were needed. Mr. Taylor and his assistants deserve much credit for obtaining one hundred pictures, of which only one-fifth were used for illustration. The complete picture-story of the Annual Report of the Shade-Tree Division, Department of Parks

and Public Property of the City of Newark, New Jersey, is an accomplishment of which the club feels proud. It has given the city-officials the assurance that it expects to aid them along similar lines, at any time called upon.

Newark is especially pleased with the city park-system which is stretched out through the center and outer portions of the municipality. The photographs of the Military Park, Reuben B. Azhderian, are splendid examples of the possibilities for comfort and pleasure to be derived from a centrally situated park. Situated, as it is, in the center of the city, it is a breathing-space for the multitude. What would it be without the shade-trees? On the other hand, the photograph of the horse-chestnut trees on Alpine Street, by A. M. Platt, shows an extremely fine example of the result of paving of a tree-belt without regard for the work of nature.

This paragraph is where the INDIVIDUAL comes in. You who have taken time to read this, perhaps, monotonous narrative, must be interested in the camera and its wide range of possibilities, or you would not have gotten to this point. If you are a member of a camera club, society or guild, very well and good; it will then be your pleasure and duty to bring this article to the attention of the governing board and officers, in order that they may see what really wide-awake camera clubs are doing for the community and for themselves. There is no excuse for any club not to be active, wide-awake and public-spirited. If not, then some one within that body should shake things up a bit. On the other hand, if you are not affiliated with any of the above-mentioned organizations, you should lose no time to make application to one for membership. Every club in America needs and will welcome an ambitious worker, especially one who has had the courage to read this article. The proof of the pudding is in the eating; but the camera club has this advantage over the pudding, you can resign, if it does not come up to your expectations; but you should at least give it a trial. This holds good with the pictorial worker also. His place is certainly in some city organization as well as the national one. Who could do as much to advance the art, as the pictorial photographer if he had a mind to? Come on, friends! Find the club in your city, or organize one, and let the world know that we are going to place America in its proper position in the realm of photographic pictorial art.

The foregoing may appear to some to be an exploit of what the Newark Camera Club has done; but it isn't, by any means. It is only an example of what can be accomplished in the



MILITARY PARK, NEWARK

NEWARK CAMERA CLUB

REUBEN B. AZIDRIAN



TREES DOOMED BY PAVING
ARTHUR M. PLATT
NEWARK CAMERA CLUB



interest of the community. The tale is not told except in the hope that other clubs and societies devoted to the art and science of photography may wake up to their opportunities to do a service to the city and, incidentally, to themselves. If this is brought to pass, the time taken to write this article will be more than repaid. It is of particular pleasure to the writer to note the renewed enthusiasm that is being shown by the camera club throughout the country, especially by those of the Associated Camera Clubs of America. They have, to the number of twenty-

two, entered into the spirit of the Association even beyond my fondest hopes, and the coming year will prove even more successful. Enthusiasm and good-fellowship have proved the keynote of the success of this but recently formed organization; and from every point comes promise of greater activity among its members. Every confidence is placed in the belief that the few clubs or societies that have not yet seen the light, will soon join hands with the A. C. C. of A. and, as a part of the work, do their bit for civic improvement.

Artificial Lighting



PREVALENT idea among photographers, experienced as well as beginners, seems to be that the use of artificial light differs in some mysterious way from that of daylight. To a certain extent this is true, because in working with the former the source of light is usually small, and more skill is needed in arranging it. Broadly speaking, the elementary principles of lighting are the same, whether daylight, electric or flashlight be used, and if any difficulty be experienced in using artificial light, it arises from the fact that these principles never have been grasped.

In the first place, the tyro must never lose sight of the fact that moving the sitter is equivalent to moving the light, and that it is much easier to move both sitter and camera than to alter the position of the lamp or lamps. As an example, we will suppose that a full-face portrait is required, and that when the model takes his seat the lighting appears flat and without character. This may be remedied by turning the face away from the light, when shadow will at once appear. From the original position of the camera we have now a three-quarter view of the face, which is not wanted, so that we move the camera in the same direction, until we again obtain the full-face view. If the shadows are rather too heavy the reflector is used, due care being taken not to give the impression that a second source of light has been used. Injudicious use of the reflector destroys the modeling on the shadow-side of the face and obliterates all its characteristics. If there is excessive shadow under the eyebrows, nose and mouth, it indicates that the light is falling too vertically upon the head, to remedy which the sitter must be placed

further back from the light, whereas, if the contrary be the case, he must be brought forward.

A common fault is overlighting; that is to say, the face is so flooded with light that all delicate gradations are lost and the lighted side of the face appears flat and dense in the negative. This is due either to insufficient diffusion or to the sitter being placed too near the light; the remedy for this is obvious. It may be said that, as a rule, artificial-light installations sent out by the makers are inadequately supplied with diffusing-arrangements, the idea being apparently to make them capable of giving results of some sort with the shortest possible exposure. A simple test for diffusion, when ordinary soft effects are required, is to hold a piece of white card in the position likely to be occupied by the sitter, and to observe upon it the shadow of an ordinary pencil or stick. If this be at all sharply defined, further diffusion is necessary.

Although some forms of electric lamps are more convenient than others, there is no reason why, with a little study, good results should not be produced by any of them. Enclosed arc, open arc in reflector, mercury vapor and half-watt incandescent differ widely in appearance; but, if properly controlled, they will produce negatives which are indistinguishable from one another. A single enclosed arc is perhaps the most difficult to manage; but if fitted in a large card cylinder with a tracing-cloth front, supplemented by a muslin head screen, it will give sufficiently soft results. The open arc in an umbrella reflector (Northlight) can be used for many subjects without a diffuser; but the aforesaid head-screen will often be found useful. The mercury-vapor lamp requires a long diffusing-curtain suspended in front of the tubes. Pink



THE ARISTOCRAT

C. B. WEED

nun's veiling is particularly suited to this purpose. Half-watt lamps, if of high candle-power, require much the same treatment as the enclosed arc; it is better to use several smaller lamps when a thin white-muslin diffuser in front of each will be found sufficient. For very soft results, a butter-muslin (cheese-cloth) head-screen will be found useful. The small, round diffusers, issued with the orthodox reflectors, are insufficient, except for strong effect, and allow light to escape at the sides, which may cause fogging if allowed to reach the lens.

Whatever form of light is chosen, the lamps should be capable of being raised and lowered. If permanently fixed, sufficiently high for full-lengths, they will be too high for sitting figures and children, the distance causing the exposure to be needlessly prolonged. If several lamps are used, each should be provided with a separate switch, so that only as many as are actually needed are kept running. It is a good plan

to arrange backgrounds or screens, so as to keep the camera-end of the studio in shadow. This obviates the risk of unwanted light reaching the lens and tends to cleaner shadows in foggy weather.

The beginner will do well to keep before him as a guide a good photograph that shows the style of lighting he wishes to produce, to arrange his lamp-reflectors and diffusers until everything appears to be correct to his eye, and to note their positions carefully. Then, and not till then, make an exposure, which should be developed and printed for comparison with the guide-photograph. If not quite satisfactory, a second trial should make it so. This operation should be repeated with various styles of lighting until all are mastered. A little systematic work of this kind will do more to obtain good work than months of haphazard exposing and making alterations without any clear idea of what they will effect.—*The British Journal*.

Art and Practice

WILFRED A. FRENCH, Ph.D.



IT was about eight years ago, when a young photo-pictorialist of rare talent left his home-town in northern New York to seek a position as "posing-artist" in one of Boston's leading portrait-studios. His artistic reputation had preceded him, for he was received cordially by the proprietor, whose patronage came from ladies of the most exclusive circles. The next day saw the new studio-artist as master of all he surveyed, having received virtually *carte blanche* from his employer.

Early, the morning following his first day of activity, he was called into the private office and asked by the proprietor how it happened that ten plates—the result of only two sittings—was all he had to show for a whole day's work at a salary of seventy-five dollars a week! On investigation it developed that in an effort to produce inspired and original works of art, the new studio-artist had subjected the two sitters to various eccentric poses and strange lighting-effects—he, himself stopping to await the divine afflatus—all of which consumed much valuable time; whereas he was supposed to work industriously and turn out sittings at the rate of at least twenty per day! The proprietor, who was a practical and successful business-man, admitted that his new employee was a genius, but one whose productive capacity was not commensurate with the demands of an energetic and prosperous portrait-studio. He was dismissed for good and sufficient reasons.

This incident may well serve to impress amateur photographers who desire to enter the professional field with the necessity to learn the difference between theory and practice, and how much important work can be performed in a given period of time. This subject is illustrated in *The British Journal of Photography* under the caption, "Genius and Technique."

"There is a small class of photographers who affect to despise the technical side of their work, fearing that they will not be regarded as real artists if they are acquainted with the composition of their developing-solutions or the aperture of their lenses. To these we have nothing to say. There is a much larger class which suffers under the same disability, but not with intent. Their sin, if it can be so called, is simple ignorance. In nearly every other art or science, a considerable amount of drudgery is necessary before the novice can blossom out into a practitioner; but in photography the possession of suitable appa-

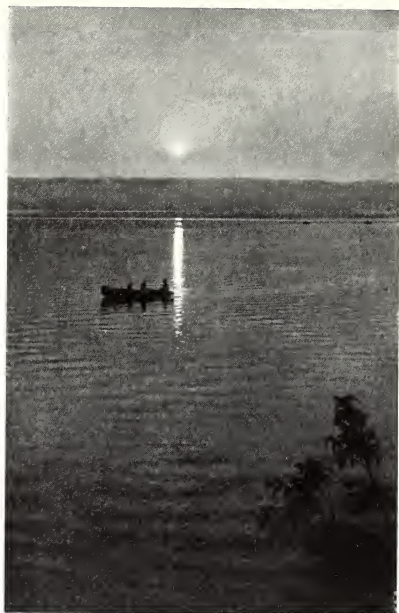
ratus and premises is, in the opinion of the youthful enthusiast, all that is necessary to bridge the gap between button-pressing and professional portraiture. We willingly grant the postulate that taste and artistic knowledge are inherent in the individual, but the question that always remains is: how is a certain impression to be transferred to paper in the most perfect and effective manner? We may compare the untaught photographer with a person who can read music, and appreciate its merits, and straightway attempts to render Bach or Chopin before learning to play scales and exercises.

"Many who have attained a temporary success in photography have done so on the strength of a few lucky flukes, and have found no small difficulty to keep up their reputation. As their successes have been obtained, they knew not how, they could not be repeated except by accident, and a level, hardly reaching mediocrity, was all that could be attained, aimless experiments with fresh plates and papers serving only to depress rather than to inspire.

"To avoid this unhappy state, there is nothing for it but to give careful attention to the technical side of photography until it is clearly understood how lenses differ as regards definition, focal length and rapidity; why some plates render colors satisfactorily while others do not; the varying qualities of plates as shown in the vigor or softness of the image; the power of printing-papers to reproduce the tonal value of the negative, or to give the precise shades in monochrome which the photographer desires. Such knowledge cannot be evolved from the inner consciousness of the worker; yet without it, unless saturated with self conceit, he must acutely feel his shortcomings, although he does not dare confess them.

"One of the weak points with the untechnical worker is exposure. Fortunately, there is so much latitude that exposures varying between one-half and four times the normal amount will all yield printable negatives; but the farther the correct exposure is departed from, the farther also is the result from the effect aimed at when the exposure was made. Even studio-exposures can be calculated by simple means with some degree of precision, and guess-work, the terror of the darkroom assistant, avoided.

"Although a photographer's education is never completed, no very severe course of study is needed to enable him to work intelligently. For example, the selection and use of lenses call



SUNSET—LAKE KEUKA

WARD E. BRYAN

for no knowledge of mathematics or even arithmetic, whereas the necessary knowledge of chemistry is little more than is required in cookery, so that no one need be deterred from entering upon it. If it can be obtained, personal instruction is the quickest and most pleasant way to learn photographic technique, since the student has the opportunity to clear up any doubtful points as he goes on, and can explain to his mentor in what direction his aspirations tend. It is to be regretted that the old style of photographic society, where professionals, amateurs, chemists and opticians met for mutual help, has almost ceased to exist, for much good work was done in this way. The study of standard books, such as those of Watkins, Abney and Chapman Jones, cannot fail to be helpful; but most elementary treatises on photography lack the necessary teaching-note which the student requires.

Much may be learned by attending trade-demonstrations, and such fixtures as the Professional Photographers Association Congress should on no account be missed. We have found among modern photographers little of the old-fashioned jealousy and secretiveness which was common a generation ago among non-society-goers, and it is our hope that we may attain the American position where the big men in photography esteem it a privilege to be called upon to demonstrate their methods of working.

"We have so far been addressing those who have entered the ranks of photography from the art-side at a mature age. In the case of young people who are entering the profession, the technical side should be the first care, and a proper course of training, either in a good studio or recognized school, should always be the preliminary step to opening a studio."



THE CAMP FOR DINNER

BERTRAN F. HAWLEY

The Introduction of Figures in Landscape-Work

BERTRAN F. HAWLEY



COINCIDENT with the arrival of summer, a more general interest is always apparent among members of the camera-clan. While there should be opportunity at every season for good pictorial work, still, for various reasons, the greater part of it is done in the summer-months.

Some workers set out with well-defined mental pictures expressive of thoughts they wish to interpret, and in the outdoors seek the necessary material to build up these compositions. Again, others take with them only the great love of nature in their hearts, which overflow with the desire to make some of it more permanent that they and their fellow-men may enjoy. All they ask is to find the open places, rolling meadows and wooded hills, or to be by the whispering sea. Then as nature is before them they use their cameras, trying to catch the spirit of each bit of beauty. Either worker may be a true artist.

Speaking generally, most of these resulting pictures are purely landscapes, some more or less water-studies, and a few marines. Occasionally, we find some good work in the outdoor genre

class. Other than this, it is not often that we find specially successful pictures in which figures are introduced for pictorial purposes, such as strengthening a composition, the better interpretation of the artist's theme, and that beautiful class of pictures wherein the figure and setting work together to convey some mood or feeling.

Why is the human figure so generally left out of landscape-work? It is true that a great many scenes are complete within themselves, those gems of scenic loveliness in which nature, with her perfect beauty, is sufficient—it is merely up to the worker to place within his picture-space a properly balanced composition. But there are times beyond number when the real charm—of some part of Nature that we have enjoyed—lies in our intimate mingling, as it were, with nature at each particular time. It is in our immediate association with nature that our love for each bit of beauty is awakened. We bring home many pictures from our outdoor holidays, and some of them are successfully pretty; but how often—when looking them over—do we realize that the spirit is lacking of what was most enjoyed? Have you ever given it the thought,

that the careful introduction of our companions or ourselves in some of these pictures might have made them more truly suggest the enjoyment of those hours spent out-of-doors?

The vacation looked forward to each year that is at hand; and as usual it is one in which our camera will not only help make the most of each day, but enable us to bring back parts of it that we can still enjoy and share with our friends as well. At the end of a long day's drive in from the railroad, we arrive—with our duffle—at the foot of a northern lake. The

Bright sunshine from the crystal blue above makes perfect picture-weather. Some very good compositions are secured that show charming bits of the lakes and connecting rivers, and an odd portage or two. But the one composition especially wanted—one that will bring to our minds in future the most of that paddle—seems hard to make with scenery alone. For the very charm of it lies in our paddling up that beautiful stretch of waters, coming quietly upon the emerald islands and watching them as they silently drift behind, and thus being part of it all for the



OVERLOOKING THE FOREST

BERTRAN F. HAWLEY

canoe is at the landing. Ah, that one word, "canoe"! To the men of the north it means most everything, for in many ways it makes their life-work possible. To the camper who seeks the beautiful it is inseparable—whole days of pure delight as he paddles through just picture after picture, each seemingly more beautiful than that which passed before. Our route takes us up one of those chains of lakes to be found almost anywhere in the granite-rock country of Northern Ontario. And when we come to the headwaters near where our camp is in the forest, it is with a feeling of security that we pull up on shore our trusty friend—the canoe.

On the paddle up, pictures are made at every opportunity. Most of the time, there is a typical northern sky, filled with those drifting clouds so light and feathery, and yet so full of color,

time. Finally, our pictorial efforts are rewarded in "The Camp for Dinner." The setting is typical of any of the larger lakes through which we go. It is a well-balanced picture within itself—so suggestive of the country, quiet and peaceful, yet big and strong—and it would pass almost anywhere for a successful picture, yet it does not convey all we wish. Then we pull our canoe up on shore and prepare the noontime-meal. Pictorially, this is what happens. By the introduction of the canoe-men and what they are doing, we have a much stronger composition. Before, we had a pretty picture; now, there is much more to it. By the way the canoe is pulled up on shore, we know from which direction it came and the imagination is stirred. The eye at once follows the shore-line to the canoe and then the figures, where it is content to rest



HUNTERS IN THE HILLS

BERTRAN F. HAWLEY

for a time. Then, naturally, we follow the shoreline, but with how much more added interest, for that is the probable route of the campers and we would go on with them around the distant point.

The next few days are spent in the forest-clad hills around the camp. There are pictures everywhere,—birches that cover the hillsides, and groups of the beautiful red pine, here and there, on the higher places standing clear against the sky. After a climb to the top of some bluff, it is wonderful to look down at the forests—just trees, as far as the eye can see, trees and granite-rock. Individual groups of trees can be pictured successfully—it is just a question of working out a pleasing composition and waiting for a favorable light. But to get the effect of thousands of them, as viewed from some point of vantage, is a different matter. "Overlooking the Forest" gives just a little idea of its beauty. Naturally, the aim was to make the forest of chief interest and to give the impression as in looking down upon it. The expanse of tree-tops was relieved by including some of the rugged bluff at the right, which makes the only strong line in the picture. But what we wanted was still lacking, and we needed the figure to hold the interest, and in turn transmit it to the forest below.

In the introduction of figures in landscape-work, the principal thing to avoid, is to have them too near the center. They may be placed successfully almost anywhere else. The happy medium of position seems to be about midway between the center of picture and either side, and usually a little above or below an imaginary horizontal line that divides the picture. Study the composition of your setting and pick out its strongest line, be it well-defined or purely suggestive. Then follow this line, and you will usually find the best position to be on or very near it. Figures may often add to the strength of an already successful picture; and they can be the making of many that otherwise would not stand alone. Nothing else that we can place within our picture-space has the strength of the human figure. By the attitude, almost any emotion may be expressed. By occupation—be it work or pleasure—a story is suggested. The direction in which the figure is looking may alone be sufficient to balance a very unsteady composition.

If there is one part of the wooded hills more beautiful than another, it is where the white birches stand, in places, row upon row, battalion-deep. They are the most lady-like of all the trees, prettiest in the budding spring-time,

brightest in their summer-green and, when autumn comes and the leaves are gone, still beautiful. How often do we wish a picture that will have in it some of the charm of those afternoon-tramps through the birches! As the autumn-sun drops lower in the west, they apparently are not white, for they make on the mountain-side a symphony in gold. It will surely need a strong composition to hold those vertical lines of reflected sunlight. But that is when they most appeal to us, and we can but try. After carefully looking around, we choose for the

the background for impromptu groups. And when breaking camp, the last thing is to take a farewell view of it. In a sense the camp is well pictured, in so far as an abundance and variety of pictures make it so. But how many of these mean more than just the structure itself, and the usual good time associated with camp-life? If this is all the campers care about, well and good; but there is often opportunity to make much more out of it.

Our camp, being of natural-log construction in a virgin-forest, certainly was as picturesque



THE CAMP IN THE WOODS

BERTRAN F. HAWLEY

foreground a part of the hillside where the granite-rock is nearly bare, many a very strong oblique line, which is still further accented by shadows and patches of mountain-moss. We have to use more, and still more of it, to balance the birches; and even then it does not satisfy. But, when we add the two hunters and have them looking down through the trees in front of them, what a difference then! Truly we have in "Hunters in the Hills" a strong composition, in which is a little of that rugged strength of the north.

Camps are pictured perhaps more than any other part of an outdoor vacation. If the weather is favorable, this is done at the first opportunity, and every day or so afterward it is

as possible, and the setting perfect. Admirable pictures were made of it, close-up views, and others from a convenient opening in the surrounding woods. And there were little groups made about it, not posed, but doing perfectly natural things in the usual routine of camp-life. All made very essential and pleasing pictures. But each time, when coming in from the daily tramps in the surrounding hills, one could not help feeling that there was an appeal to it we had not yet been able to secure. Day after day, it became more noticeable that the happiest view of it was always the very first as one came in tired from the hunt—the first glimpse merely sufficient to show its character and position. It was so much a part of the forest, without which



THE CALL OF THE NORTH
BERTRAN F. HAWLEY

it meant nothing. Then pictures were worked out from a distance back among the trees, and they were much better. But it was still necessary to include the tired hunter coming in from the trail.

Without the figure, the small part showing of the cabin might mean anything. And notice the change in our composition. Before the hunter was added, there were too many vertical lines—the numerous tree-trunks, big and little. The ground was more or less horizontal, but nothing definite. Now notice the strong curve of the trail coming into the foreground a little from the right and leading to the distant cabin. Purely suggestive? Maybe! But to one who has camped in the forest—very plain, indeed.

The short two weeks are ended all too soon. With one last look at the dear old cabin we leave it, hidden there in the forest. Once more we embark in our old friend, the canoe—more joyously buoyant than ever it seems, so responsive to the slightest stroke of our paddle-blade. Only this time the bow is turned southward, back to the busy world.

On the homeward-trip, the old canoe-route seems more wonderful than before. Now, each particularly pretty spot is awaited eagerly as we come upon it from the opposite direction. And how altogether different some of them are—a new picture well worth the making! But there is a stronger feeling connected with it all not yet expressed—something subtle that gets you, so noticeable at each landmark, each blaze along the trail. Although we are going the other way, they keep ever calling us back—these little signs of the forest where others have been before. Here, it is the remains of an old camp-fire near the water's edge on a sandy beach; and there, the tell-tale marks in the soft, brown earth at the beaver-dam where we have to carry around. It is in the sound of the falls at the rapids, musical, sweet and clear; and on the lakes in the longer paddles there is a something in the air. Ah! it is the Spirit of the North that is ever calling us back to its wilderness beauty again.

One cannot think of it alone without the intimate association of some typical voyageur of the north. He may be hunter or trapper, the ranger of the district, or some prospector looking for hidden treasure. But in our mental pictures there is always some human figure, characteristic, ever looking ahead. And that we may catch the spirit of it at all with our camera, he is the one feature necessary to complete the setting.

The scene—one of many, more or less alike, through which we pass—is at the end of a short portage where one stops to rest a bit before going

on. The foreground is full of the luxuriant growth of brakes always found in the low places; the middle-distance, a heavy growth of tall alder-bush through which winds a little stream leading into the distance, where we have a glimpse of the beautiful lake, beyond. And through it all there is a vibrating sunlight, making it bright, yet soft and full of mystery. On the grassy bank of the stream is a canoe with the bow already in the water—the canoe-man is standing near. He has just made the carry-over, and stands leaning on his paddle a few moments before pushing off. The poise of the figure bespeaks a story possibly not all of which is in keeping with the happy scenes around him. There are many strenuous days on the long trail. Though the little canoe is ever happy as it glides lightly over the waters, still the canoe-man is sometimes weary on the sea of Life. He is tired and, maybe, lonely; but withal still going on, and never a look down the backward trail. It is "The Call of the North," indeed!

In landscape-work, the artist finds an unlimited variety of material. It would seem that he need never be at a loss for a change of subject. But even so, there are times when carefully-worked-out compositions begin to have a sameness to them, never coming up to expectations—they are just pretty, nothing more. The spirit of each little part of nature that appealed when the picture was made, never seems to be in the finished print. When things get going wrong like this, ask a friend to help you and try the introduction of figures in some of your study-work. Although this may not always make successful pictures, still, it will oftentimes help a very great deal.

And, lastly, may we add just a few words with regard to vacation-pictures; for there is nowhere else that serious figures-in-landscape work can be used to better advantage. The camerist usually plans on some holiday during the summer-season; and although pictures may not be the reason of his going, still, they are the source of greatest enjoyment to him. In these pictures—as well as all others—their being successful does not depend on the pleasant effect of the moment. The average outdoor-group is merely a record. Scenes, alone—unless they are especially good ones and carefully worked out—do not preserve the pleasure of the outing. But in some of the prettier scenes, the help of the camerist's companions will enable him to make many a worth-while picture; and these will be a lasting source of enjoyment to himself as well as his friends many years after the event has taken place—always a pleasant memory of happy days spent out-of-doors.



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Photographing the Trapdoor-Spider



MONG the participants in the "Nature-Studies" competition which closed March 31, and the successful results of which appear in this issue, is Mr. Otho Webb, of Queensland, Australia. This camerist won Honorable Mention for his series of truly remarkable photographs of one of the most intelligent creatures of insect-life—the trapdoor-spider—which appears on the opposite page. By the exercise of the three important faculties of the nature-photographer,—skill, caution and perseverance,—Mr. Webb succeeded in picturing the spider's method of closing the door to his domicile. The reproductions are the same as the original prints, which are natural size and enhance their interest. The data furnished by Mr. Webb are as follows: "Open"—made at 11 A.M.; Voigtländer Alpine Camera; Collinear lens, F/6.8; stop, F/28; 1 second exposure; Central Comet plate; pyro in dish; enlarged on Kodak Star Bromide Paper. "Closing"—11 A.M.; direct sunlight; additional light on subject was obtained with the aid of two mirrors; camera and lens as preceding; stop, F/6.8; 1/200 second exposure; Imperial Special Rapid Ortho; pyro in dish; print as preceding. "Closed"—data the same as with "Open," except that direct sunlight was screened off and sunlight reflected with a mirror in order to get a more suitable light to show up the outline of the closed lid.

The following account is taken from the *Encyclopædia Britannica*:—

"Trapdoor-nests are made by spiders belonging to two widely different groups, namely the *Lycosida* or wolf-spiders, to which the true tarantula belongs and the *Mygalomorpha*, containing the species which construct the best-known types of this style of burrow. Although there is no direct genetic affinity between the spiders of these two groups, an interesting parallelism in their habits may be traced. In both, there are species which form no nest or burrow, others which construct a simple, silk-lined tunnel in the soil, and others which close the aperture of the burrow with a hinged door; while both share the habit of lining the burrow with silk to prevent the infall of loose sand or mould; and the species which make an open burrow close the aperture with a sheet of silk in the winter during hibernation, and open it again in the spring. Possibly, from this habit was developed the instinct to build a door with a movable hinge. In the trapdoor-species of *Lycosida* like for instance *Lycosa opifex* of the Russian steppes, the hinge is weak and the lid of

the burrow is kept normally shut by being very much thicker and heavier at its free margin opposite the hinge so that it readily falls by its own weight. In the burrows made by the *Mygalomorpha*, on the contrary, the hinge is strong and highly elastic, its component silken threads being laid on in such a way that the door shuts with a snap when the occupant has passed in or out. The lid is sometimes thin and wafer-like as in the burrow of the species of *Nemesia*, sometimes thick and cordlike as in that of the species of *Cteniza* or *Pachylomerus*. Its upper side is always covered by the spider with pieces of the vegetation growing hard by, so that, when the door is closed, the position of the burrow is completely concealed. If an attempt be made by any enemy to lift the lid, the spider seizes its inner side with his fangs and striking his claws into the walls of the burrow offers the greatest possible resistance to the efforts of the intruder. When on the watch for prey the spider slightly raises the lid and, peeping through the chink, darts like a flash upon any beetle or fly that unwittingly passes within reach. Quite commonly, the burrow has a second passage running obliquely upwards from the main passage to the surface of the soil, and this subsidiary track may itself be shut off from the main branch by an inner door, so that when an enemy has forced an entrance through the main door, the spider retreats behind the second, leaving the intruder to explore the seemingly empty burrow."

According to Comstock's "Insect-Life," trapdoor-spiders are found in the Southern and Southwestern parts of the United States.

It must be evident to the intelligent camerist that an unlimited field of photographic exploration lies before him in the insect-world. Were he to confine his camera-activities to photographing butterflies, he would be occupied profitably during an entire summer. Many beautiful examples of butterfly-photography have appeared in the pages of PHOTO-ERA. One of the best is Kenneth D. Smith's masterpiece on page 306 of this issue. Many interesting subjects may be found among grasshoppers, beetles, ants and other easily accessible insects. Obviously, much time, patience and possible physical inconvenience may be required to obtain satisfactory results; but the end to be attained is well worth the effort. The ambitious camerist will find that his interest in entomology will lead him into many beautiful by-ways of nature-study; and thus, as he progresses, he will become attuned to all nature and thus grow in mental and physical strength.



Closing



Open



Closed

A TRAPDOOR-SPIDER
(natural size)

OTIOPS PUMILIO

HONORABLE MENTION—NATURE-STUDIES



DORIS ARDEN
EDWARD THAYER MONROE





EDITORIAL



Instruction in Photography

SCARCELY a week passes that does not bring to the Editor inquiries regarding a school or a place where one may obtain sound practical instruction in photography. The request for such information comes generally from persons who do not wish to attend the institutions advertised in PHOTO-ERA, because they are geographically inconvenient. In most cases, large cities other than New York are preferred, and these include Boston, Philadelphia, Chicago, St. Louis, Los Angeles and San Francisco. Strangely enough, none of these cities seems to be favored with a school of photography worthy of the name, but—and as stated frequently on this page—certain institutions of learning have a photographic department in which the science of photography is taught by competent instructors. One of the best of these institutions is the Massachusetts Institute of Technology; another is the Brooklyn Institute of Arts and Sciences. In none, however, is it pretended that the student can be fitted to execute successfully, and for the first time, a piece of regular professional work, such as photographing the interior of a store, to make a home-portrait or a flashlight-group, or to copy an oil-painting. Much less would he be able to begin life as a professional photographer either in portraiture or commercial work. Knowing the optical and chemical principles of photography, and being a man of character and good habits—the student should find it easy to obtain lucrative employment in almost any photographic studio, where he can progress according to his capacity and initiative and, within a comparatively short period, either obtain an active interest in his employer's business or start a business of his own.

Then there is the inquirer who wishes to take up photography merely as a pastime. Here, the matter is not difficult to arrange, for the inquirer is referred to an amateur worker—not one who himself has just learned the rudiments of the art, but one who is an expert and willing to give instruction for suitable remuneration. Naturally, much judgment needs to be exercised in such matters; happily, the persons recommended by us have not only proved eminently satisfactory—from considerations of ability and personality—but have welcomed the oppor-

tunity to add to their income and to form pleasant acquaintances. In one instance, a young, successful camerist has gained a number of pupils by means of judicious advertising, including personal recommendations. He caters particularly to persons of leisure, or to retired businessmen, who are looking for an agreeable, grateful pastime. It is easy to see where an enterprising camerist, favored with education, a pleasing address and tact, can turn his hobby to good account. Indeed, it opens up a field of pleasant and remunerative activity to the amateur who is looking for an answer to the oft-repeated query, "How can I make my camera pay?" In one case, it is the profitable disposal of his prints or negatives; in the other, a lucrative disposal of time and opportunity.

The Need of High-Class Photo-Finishers

THERE are many camera-users who employ professionals to do their photo-finishing which—if they are intelligently critical—is often found to be very unsatisfactory. The customers try to be content, because they suppose that the work of all photo-finishers is alike. It is true that, as a rule, the photo-finisher has but one regular method of developing and printing. He either does not know how, or has not the time, to give each film or each negative the individual care it should have. If a badly made enlargement does not please a customer, the photo-finisher simply lays it to the negative or to the paper. In nearly every large city, however, there is at least one first-class, conscientious and reliable photo-finisher; but in order to give special care to poorly exposed films or plates, and to the printing of them, not to ignore satisfactory enlargements from almost impossible negatives—all of which requires skill and experience—he is compelled to charge an advance over the prevailing prices for regular (purely mechanical) work. The exacting customer, eager to get the best possible results, is only too glad to pay for the special skill involved. In his eyes, an artistic and satisfactory enlargement from a negative, good or poor, is worth every cent of the increased price he pays for it, and he is very apt to recommend the expert photo-finisher to his friends.



ADVANCED COMPETITION



Closing the last day of every month
Address all prints to PHOTO-ERA, Advanced Competition
367 Boylston Street, Boston, U.S.A.

Prizes

First Prize: Value \$10.00.

Second Prize: Value \$5.00.

Third Prize: Value \$2.50.

Honorable Mention: Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.

Prizes may be chosen by the winner, and will be awarded in photographic materials sold by any dealer or manufacturer who advertises in PHOTO-ERA, or in books. If preferred, the winner of a first prize may have a solid silver cup, of artistic design, suitably engraved.



Rules

1. This competition is free and open to photographers of ability and in good standing—amateur or professional.

2. **No more than two subjects may be entered, but they must represent, throughout, the personal, unaided work of competitors. Remember that subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era awards are announced.** Prints on rough or linen-finish surface are not suitable for reproduction, and should be accompanied by smooth prints on P. O. P., or developing-paper having the same gradations and detail. All prints should be mounted on stiff boards.

3. *Unsuccessful prints will be returned only when return-postage at the rate of one cent for each two ounces or fraction is sent with the data.*

4. *Each print entered must bear the maker's name and address, the title of the picture and name and month of competition, and should be accompanied by a letter, SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Data-blanks sent for a 2c. stamp. Be sure to state on the back of every print exactly for what competition it is intended.*

5. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. However, this does not prevent the photographer from disposing of other prints from such negatives after he shall have received official recognition.

6. Competitors are requested not to send prints whose mounts exceed about 11 x 14 inches, unless they are packed with double thicknesses of **stiff** corrugated board, not the flexible kind—or with thin wood-vener. Large packages may be sent by express.

7. Competitors who have won three first prizes within a twelve-month, become ineligible for two years thereafter. The too frequent capture of the first prize by one and the same competitor tends to discourage other participants and to make the competitions appear one-sided and monotonous.

Awards—Nature-Studies Competition

Closed March 31, 1920

First Prize: Thomas Elsum.

Second Prize: Kenneth D. Smith.

Third Prize: Dr. J. B. Pardoe.

Honorable Mention: W. T. Adderley; A. C. G. Allison; Laurence Baker; Beatrice B. Bell; Ralph H. Blohm; Peter Botel; Charles Burrows; F. H. Chant; Daisie B. Chapell; Dr. A. H. Cordier; John Dove; C. R. Dyer; Geo. M. Gerhard; Paul E. Guillot; Ralph R. Hall; Arthur Harrison; Bertran F. Hawley; Charles A. Hughes; V. Max Kemery; Frank King; S. B. Marchant; E. S. McKay; Ozan K. Nunome; Guy E. Osborne; Burr K. Osborn; F. Y. Ogasawara; Fred R. Raven; Joseph Coburn Smith; W. Steleik; Otho Webb; C. Bronson Weed; William J. Wilson.

Subjects for Competition—1920

"Twilight-Pictures." Closed January 31.

"Still-Life." Closed February 28.

"Nature-Studies." Closed March 31.

"Rainy-Day Pictures." Closed April 30.

"Miscellaneous." Closes May 31.

"Speed-Pictures." Closes June 30.

"Rural Scenes." Closes July 31.

"Shore-Scenes." Closes August 31.

"Outdoor-Genres." Closes September 30.

"Architectural Subjects." Closes October 31.

"Domestic Pets." Closes November 30.

"Indoor-Genres." Closes December 31.



Photo-Era Prize-Cup

In deference to the wishes of prize-winners, the Publisher will give them the choice of photographic supplies to the full amount of the First Prize (\$10.00), or a solid silver cup, of artistic and original design, suitably inscribed, as shown in the accompanying illustration.



CRITICISM to be helpful should be kindly and constructive. It should be remembered that the workers who so generously lend their pictures to be criticized, for the good of all, deserve to be treated with courtesy. Criticism and commendation can be expressed with candor enlivened, if need be, with occasional, good-natured humor. Sarcasm should be avoided.



THE INTRUDER

THOMAS ELSUM

FIRST PRIZE—NATURE-STUDIES

Facts and Figures from a Note-Book

BEING an inveterate note-maker, says Arthur G. Willis in *The British Journal*, I find that I have collected a number of facts and figures relating to photography. They are much too disconnected to form an article, but I think that they will be found of general interest in spite of this. I can claim no originality for them, but since they have been collected in a very wide reading of photographic books and papers, it is likely that some will be new to everyone. To the original publishers I tender my thanks, as every item has proved itself of value to me in some way. I have made no attempt to classify them:—

To convert a percentage figure into ounces per pint divide by 5—*i.e.*, 25 per cent solution is 5 ozs. per pint.

A 10 per cent solution contains 44 grains per ounce of liquid.

The whitest white card obtainable reflects about 30 times as much light as the blackest black card.

To show up the grain on white wood, as in photographing furniture, rub over with—

Benzine, 1 part; kero-sene, 1 part.

This will evaporate.

To make mat-varnish, add tartaric acid to ordinary negative-varnish to saturation.

When copying on an enlarged scale, the lens need cover only the original—*e.g.*, to copy a half-plate ($3\frac{1}{4} \times 5\frac{1}{2}$) print to fill a whole plate ($6\frac{1}{2} \times 8\frac{1}{2}$) a half-plate ($3\frac{1}{4} \times 5\frac{1}{2}$) lens will suffice.

To fireproof calico for flashlamp-curtains and other uses, soak in solution of tungstate of soda; or, less effective, common alum.

To fireproof muslin, use—

Boric acid.....	5 parts
Sal ammoniac.....	15 parts
Potassium feldspar.....	5 parts
Gelatine.....	$1\frac{1}{2}$ parts
Starch-paste.....	50 parts
Water.....	100 parts

Apply to the dry muslin with a brush.

To remove bad stains from negative, mix—

Bleaching powder.....	1 oz.
Soda carbonate.....	$1\frac{1}{2}$ ozs.
Water.....	6 ozs.

Allow to settle, and pour off clear liquid for use.



YELLOW TIGER BUTTERFLY

KENNETH D. SMITH

Dilute to half strength. Use with care, as it will soften film. When acidified with oxalic acid this is even more powerful.

To revive stale plates, soak for 10 minutes in—

Chromic acid.....	30 grs.
Potassium bromide.....	60 grs.
Water.....	10 ozs.

Wash well. When dry, plates will be clean, but slow.

To use stale bromide paper, make up—

Potassium bromide.....	10 per cent solution
Potassium cyanide.....	10 per cent solution

Add 1 drop of each to each ounce of the developer used.

To make prints transparent, for window-decoration, etc.:-

Turps.....	6 ozs. to 8 ozs.
Canada balsam.....	1 oz.

Brush over the paper side of the print.

To destroy odor from stale fixing-baths:-

Oil of cloves.....	10 drops
Petrol.....	1 oz.

Add a few drops of this to fixing-bath.

Ammonium bromide may be used in place of potassium bromide in toning-baths, but not in solutions where soda or potash is present. If it is so used, the solution will change; ammonia and soda or potassium bromide will be formed.

To make bromide prints flexible, for unmounted book illustrations, etc., soak in:-

Glycerine.....	5 ozs.
Water.....	25 ozs.

and dry without blotting or heat.

To bore a rubber-cork, moisten the borer in 10 per cent solution of caustic soda or caustic potash.

To remove ink from negatives:-

Ordinary ink.—Dilute oxalic acid solution.

Aniline ink (copying pencils, etc.).—Dilute hydrochloric acid solution.

A good general medium to color prints in dye or water-colors, or to spot, is:-

Ox-gall.....	20 drops
Methylated spirit.....	1 oz.
Water.....	1 oz.



BLACKSNAKE

DR. J. B. PARDOE

THIRD PRIZE—NATURE-STUDIES

A solution to cement film to glass is made as follows: Dissolve equal weights of gelatine and glacial acetic acid by warming and stirring. If this is too thick, use more acid.

Bromide paper may be used in an exposure-meter (actinometer) if first soaked in either:—

- (a) Saturated solution of potassium metabisulphite, or
- (b) 10 per cent solution of potassium nitrite.

Varnishes for film-negatives:—

1. Gum dammar.....	1 oz.
Benzole.....	10 ozs.
2. Borax.....	$\frac{3}{4}$ oz.
Glycerine.....	$\frac{3}{4}$ oz.
Shellac.....	$1\frac{1}{4}$ oz.
Water.....	20 ozs.

Boil together for half an hour, add 5 ozs. of methylated spirit, and filter.

Photo-Era \$2.50 After July 1

INCREASED cost of everything in the publishing-business is responsible for the slight increase of the PHOTO-ERA subscription price from \$2.00 to \$2.50, which goes into effect July 1, 1920. Of course a subscriber may renew at the present price (\$2.00) at expiration during 1920 but must do so before July 1.

Moonlight-Photography

"SOME recent enquiries have had reference to exposures by moonlight," says *The Amateur Photographer* editorially. "A good many workers, it would seem, are wondering whether they can obtain 'moonlight-effects' by that means. As is well known, most of such effects are obtained in sunlight. The camera is turned to face the sun, and an exposure given which is altogether too short to give a properly exposed negative. This, when printed heavily, gives a picture in which most of the landscape is represented by solid black masses, with a theatrical sky and the streak of bright reflected light on the water, which was probably the reason for the exposure being made. It is, after all, merely a trick, and a fairly easy one. The only difficulty likely to arise is from general fog or flare, due to the sun shining on the lens; but this can be avoided by selecting a moment for exposure when the sun is slightly obscured by cloud. With actual moonlight, the exposure necessary, even to obtain such an under-exposed result, would be too long. The moon would shift perceptibly, and the arrangement of the clouds would alter entirely. For a correctly exposed plate by moonlight, not only must a very light and open subject be selected, but the exposure in the most favorable conditions will run to many minutes, or even hours; and the result, when obtained, except for the modification of the shadows due to the movement of the moon, is not in any way distinguishable from the same scene made by sunlight.



SUBJECT FOR NEXT COMPETITION

ADVANCED WORKERS



HAYTIME

W. STELCIK

Advanced Competition—Rural Scenes Closes July 31, 1920

No matter how much we may prefer city to rural life, there is a fascination about the scenes that portray the activities of men and women who live in the country. It is well for contestants to bear in mind that this competition is not devoted exclusively to farm-scenes. In similar competitions of the past, there has appeared a tendency to consider a rural scene merely a synonym for a farm-scene. In this connection it may be interesting to point out that virtually every competition seems to have one hackneyed theme which our friends find is difficult to avoid. In still-life, we have the time-worn overturned basket of fruit or a vase filled with flowers; in rainy-day pictures, we have the wet-pavement-person-with-umbrella threadbare theme; in domestic pets, we have a record-picture of a dog or cat without regard to composition; and in each of the other competitions a similar overdone theme might be pointed out. It is often as difficult to get out of a pictorial rut as it is to avoid the same unfortunate situation in business or social life.

The vacation-season of the year is at hand and many camerists will soon be in an excellent position to make pictures that are suited to this competition. There

are many picturesque towns and villages in all parts of the United States and Canada that can yield abundant pictorial material. The article, "A Provincetown Pilgrimage" by Raymond E. Hanson and Herbert B. Turner in May PHOTO-ERA indicates the possibilities. It is the little glimpses of rural life—here and there—that touch the heart and refresh the mind. Much of the success of a rural picture depends upon the maker's ability to utilize dramatic appeal in addition to whatever artistic and technical skill he may possess. To make the most of dramatic appeal it will be well for the camerist to become acquainted with the townspeople and thus place himself in a position to judge relative values. No doubt, many of our readers are familiar with the work of A. B. Frost, the illustrator. One of his specialties was to picture the life of rural communities. His portrayal of the habitués of the post-office and general store is famous. There is no reason why the intelligent camerist cannot avail himself of similar opportunities.

If the contributor to this competition must depend upon farm-life for his pictorial material, let him be determined at the outset to obtain something different. By that I mean, avoid making a picture of a haying-scene if it is possible to find any other subject. A boy driving the cows to pasture is a far more

acceptable subject to the jury. A flock of sheep coming down the road is a theme that may be still depicted in an original and interesting manner. The old-time peddler and his varied assortment of household-furnishings which are piled high upon a rather dilapidated wagon offers a delightful theme, particularly, if he and his outfit are so placed in the picture that a beautiful old, elm-encircled farmhouse forms the background. Then, there is a picture in the arrival of some neighbors to call. In short, the camerist should endeavor to select subjects that are common enough on the farm but not usually photographed.

Perhaps, no picture makes a greater appeal than one which shows beautiful, rolling cultivated land reaching as far as the eye can see. An example of what I mean may be found in John Paul Edwards' picture, "The Valley of Carmel," in this issue. There is something about the regularity of the outlined fields that attracts the eye of the beholder and recalls to mind days spent afield. Such a picture is all the more pleasing if it can be made from some height which commands the surrounding country. However, the camerist should not attempt to include too much nor should the picture be made to assume the appearance of a panorama. To attempt the latter with a hand-camera equipped with the ordinary short-focus lens will lead to disappointment. For it should be remembered that hills and valleys are not reproduced on the plate in the same relative size that they appear to the eye. Only by employing the single combination of a symmetrical lens or by the use of a telephoto-lens can distant hills be photographed satisfactorily.

A fruitful source of pictorial material is the portrayal of the various types of rural conveyances. Obviously, such pictures should be made with due regard to composition and background. The slow but steady team of oxen is still in use and when placed in the proper setting such a subject cannot fail to afford a picture of high artistic merit. The rural mail-man often relies upon a horse and buggy to reach the outlying farms. If a picture of him can be made as he stops a moment before a farmhouse to deliver the mail and the latest gossip, the camerist may be well repaid for the effort. Then again, there is the country-doctor in his gig to be photographed as he steps out, medicine-case in hand, to call upon a patient. Included among these subjects should be the country-butcher, grocer and itinerant vender of household goods. To make any of these subjects a success, each must be convincing and prove beyond a doubt that it really is the doctor, the grocer or the mail-man.

Community-life in rural districts may be used to advantage by the camerist. The town-meeting, social affair, church-going, husking-bee, hay-ride and other activities may be photographed to show a phase of rural life that is fully as picturesque as any that may be found. However, the camerist should realize that he is portraying a scene, not the individuals that compose it. If he is photographing a town-meeting, for example, he should so compose his picture that it will include a glimpse of the main street, the trees or buildings at each side of the town-hall, the conveyances of those attending the meeting and the persons passing in or out. In short, the aim is to obtain a general view of the meeting and not permit the picture to become more of a genre than it is a rural scene. Motion-picture directors understand how to obtain these effects without focusing the attention of the beholder on any one individual or occurrence. It may be added that photographers may well study the better kinds of motion-pictures with regard to composition and technique. Particularly will this suggestion apply to contributors to the present competition. A careful

study of such scenes in a motion-picture play will give the camerist many new ideas that will enable him to work to better effect.

In making pictures for this competition, especially those that include persons, the camerist should use good judgment, tact and courtesy. Although most country-people are cordial and interested in the efforts of the pictorialist, it does not follow that all like to be included in a picture that is to be put on public view. Of course, in a case like the town-meeting, where no person or group is singled out by the camerist, there can be no objection. However, where it may be the grocer delivering supplies to a housewife, it will be well for the photographer to obtain permission. One worker of my acquaintance—a man of his word—makes his pictures first, while his subjects are unaware of his presence, and then asks politely if he may use the resulting picture if it proves to be satisfactory. If his subjects object, he promises to send them the negative—and he always does. However, in most cases, the subjects make no objection; and, when in due course, they receive a nice enlargement for their trouble, they hope that the photographer will come again soon. Whatever method the camerist may decide to adopt, let him always bear in mind that politeness is appreciated in the country as it is in the city; and that upon him, as a representative of the art and science of photography, rests the responsibility to ensure the next camerist a hearty welcome from the country-folk.

The question of camera-equipment is an important one. For certain subjects, a double-extension plate-camera is the ideal outfit, especially if it be fitted with a symmetrical lens that permits the use of the single element for enlarged views of distant subjects. However, for quick work—the ability to make the most of an unexpected opportunity—there is no equipment that surpasses the popular vest-pocket or hand-camera. Not only may these cameras be brought into action quickly; but they are unobtrusive and on that account do not seem to make reluctant subjects camera-shy. It goes without saying that the camerist should use the best lens that he can purchase within the reach of his pocketbook. Although we should all like to own several high-grade anastigmats to meet the varied requirements of modern photography, the new F/7.7 moderate-priced anastigmats now being placed on the market by several reliable manufacturers are well worth a trial. I have used one successfully for over a year, on a vest-pocket camera, and I am well satisfied that it is able to meet all ordinary demands of the amateur and professional photographer. If it were a question of the plate-camera or the hand-camera for rural scenes, I should select the hand-camera as over eighty per cent of the pictures would be made with the hand-camera, even if both cameras were at hand to be used.

Before the camerist attempts to make pictures for this competition, it might be well for him to spend a day or two looking the ground over in his immediate vicinity. A slight acquaintance among the townspeople or farmers will be of great assistance to obtain results. As I have said so often, unless the heart of the camerist is in his work, he cannot make a picture that will stir the beholder. Those workers who lived in the country in their childhood-days should not find it difficult to bring back, pictorially, glimpses of the past. A picture of the old "swimming-hole" has meant more to generations of business-men than one of the farm. The happy care-free associations that such a picture brings to mind, refresh the heart and rejuvenate the mind. Let us have such pictures in this competition.

A. H. B.



BEGINNERS' COMPETITION



Closing the last day of every month
Address all prints to PHOTO-ERA, Beginners' Competition
367 Boylston Street, Boston, Mass., U. S. A.

Prizes

First Prize: Value, \$2.50.

Second Prize: Value, \$1.50.

Honorable Mention: Those whose work is deemed worthy of reproduction with the prize-winning pictures, or in later issues, will be given Honorable Mention.



Subject for each contest is "*Miscellaneous*"; but original themes are preferred.

Prizes, chosen by the winner, will be awarded in photographic materials, sold by any dealer or manufacturer who advertises in PHOTO-ERA, or in books.

Rules

1. This competition is open only to beginners of not more than *two* years' practical camera-activity, and whose work submitted here, is *without any practical help from friend or professional expert*. A signed statement to this effect should accompany the data.

2. Workers are eligible so long as they have not won a first prize in this competition. Winners of the first prize automatically drop out permanently, but may enter prints in the Advanced Class at any time.

3. Prints eligible are contact-prints from $2\frac{1}{4} \times 3\frac{1}{4}$ to and including $3\frac{1}{4} \times 5\frac{1}{2}$ inches, and enlargements up to and including 8×10 inches.

4. Prints representing *no more than two different subjects*, for any one competition, and printed in any medium except blue-print, may be entered. They should be simply and tastefully mounted. *Subjects which have appeared in other publications are not eligible, nor may duplicate prints be sold, or entered in competition elsewhere, before Photo-Era awards are announced.* Prints on rough or linen-finish surface paper are not suitable for reproduction, and should be accompanied by smooth prints on P.O.P., or developing-paper having the same gradations and detail.

5. *Unsuccessful prints will be returned only when return-postage at the rate of one cent for each two ounces or fraction is sent with the data.* **Criticism at request.**

6. Prints receiving prizes or Honorable Mention become the property of PHOTO-ERA, unless otherwise requested by the contestant. However, he may dispose of other prints from such negatives *after* he shall have received official recognition.

7. *Each print entered must bear the maker's name, address, instructions, the title of the picture and the name and month of the competition, and should be accompanied by a letter, SENT SEPARATELY, giving full particulars of date, light, plate or film, make, type, and focus of lens, stop used, exposure, developer and printing-process. Enclose return-postage in this letter. Doto-blanks sent for a 2-cent stamp. Be sure to state on the back of every print for what contest it is intended.*

8. Competitors are requested not to send prints whose mounts exceed about 11×14 inches, unless they are packed with double thicknesses of *stiff* corrugated board—not the flexible kind, or with thin wood-vener. Large packages may be sent by express.

Awards—Beginners' Competition Closed March 31, 1920

First Prize: John C. Bird.

Second Prize: Harry F. Wegener.

Honorable Mention: R. H. Addison; Antoinio L. Marci; Albert A. Sterritt; Ruth M. Weiss.

The Beginner and Vacation-Photography

It is not too early for the beginner to prepare himself to meet the photographic demands of the approaching vacation-season. This preparation is of special importance to the beginner who is about to take the first trip afield with his new camera. I am assuming now that I am addressing the type of beginner who is eager to know more about photography than the clerk at the corner-drugstore. I am aware that many beginners are not situated so that they can do their own developing and printing; but *every beginner* should take photography seriously enough to study the rudiments of optics, exposure and composition. Why take up photography at all if he has no desire to make the most of it? Fortunately, most PHOTO-ERA readers do not belong to the "button-pusher," or "snap-shooter" class of amateur photographers. The beginner who is serious and eager to advance will soon know that repeated failures are no disgrace, and he should not take to heart any thoughtless remarks of friends or relatives. The thing to do is to keep on until the very friends who made unkind remarks are obliged to admit their mistake.

There cannot be too much stress laid on the importance of *repeated* readings of the instruction-book. These little books have been prepared by the manufacturers to help the beginner over the rough places of his tyro-days; yet, most beginners lose the instruction-book promptly and then are obliged to grope about for information that *only* the instruction-book contains. It is especially important that the beginner have the instruction-book with him when he leaves for his vacation; for then he will not have access to the helpful advice of his photo-dealer. What is more, an instruction-book is written for the camera that it accompanies; and, if it is lost, not *any* other book will do—as some beginners seem to think. All instruction-books in common give briefly the rudiments of photography; but aside from this they have nothing in common. Each contains explicit instructions with regard to one type of camera only and its lens and shutter-equipment.

Those beginners who intend to do their own developing and printing should take care to avoid using solutions that are warmer than seventy degrees; for at a higher temperature the plate or film is likely to frill and the paper to blister. There are means to overcome this difficulty; but the easiest and quickest way is to keep the temperature around seventy by means of ice, a wet towel or any equally efficacious method that may suggest itself to the resourceful beginner. Usually, in the country there is a well of ice-cold water not very far away, and this water will stay cold long enough to develop one or two rolls of film without



THE SNOWSHOE-TRAIL

JOHN C. BIRD

FIRST PRIZE — BEGINNERS' COMPETITION

danger of frilling. Water from a lake or mountain-stream may also be used successfully provided that the water is pure enough to drink.

Sometimes it is the small things that have much to do with keeping photographic equipment in order. I wish to call attention to the value of a good carrying-case for the camera. This suggestion applies with greater force to the owner of a high-grade camera than it does to the possessor of a moderate-priced box-camera. However, to each the suggestion merits careful consideration. I have known a fine roll-film camera in its case to be dropped overboard accidentally and rescued before the water had penetrated to the film itself. Numberless times cameras are dropped or otherwise abused unintentionally when their owners are skylarking at a picnic, house-party or in camp. In most incidents of the kind, a stout carrying-case is ample protection. Even if a camera is not subjected to possible rough treatment, the carrying-case preserves the leather from the effects of rain, keeps dust out of the lens and shutter and helps to retain the camera's good appearance for many years.

The first, and natural, tendency of the beginner—when he arrives in the mountains or at the seashore—is to photograph every subject that can possibly claim pictorial or personal interest. However, he should remember that at the present prices of photographic supplies he is very likely to incur a large bill and have nothing of permanent value to show for the expenditure. Panoramas are beautiful to the eye; but they dwindle to such small proportions when photographed with the average hand-camera that the beginner will

do well to let a more experienced camerist make the attempt. At summer-resorts, there are many delightful people to meet and to go with on excursions; but to photograph these people singly and in groups when they have no permanent interest, is a waste of material and effort. With the exception of a few personal pictures of friends and relatives, the beginner should try to make pictures that will be as interesting in several years as they are the moment that he makes them. One good picture of the hotel or house in which he spends his vacation is enough. If the beginner must have a picture of the hotel from every point of the compass, let him buy some printed post-cards and save his films and plates for scenes he may never be able to duplicate. In short, the beginner should determine to make every picture count to his artistic and technical credit. Promiscuous snap-shooting is a waste of time and money. Twenty-four well-composed, well-exposed and well-developed pictures of worthwhile persons and scenes are worth more than fifty pictures that the maker is obliged to apologize for on account of technical and artistic defects.

Let each beginner make the most of his opportunities this coming summer so that next winter when he picks up his photo-album to show his friends what he has done, he will merit praise instead of criticism. Let him remember that quality comes first, and that a large number of pictures does not mark his standing as a photographer. Let him make fewer pictures, and each one better than the rest—then he will know what it means to *enjoy* photographing.

A. H. B.



BUFFALO HARBOR

H. F. WEGENER

SECOND PRIZE—BEGINNERS' COMPETITION

Dust in Plateholders

UNTIL a perfectly dust-proof plateholder is obtainable, there is always bound to be the minor specking of negatives which arises from dust-particles finding entrance to the plateholder, although even one hermetically sealed, in the absence of other devices, could not be expected to obviate entirely the dust- nuisance. There is, however, a very simple method which can be used in circumstances when plates have to be carried for a long while in their holders under conditions favorable to the admission of dust, and that is to face each plate in the plateholder with a sheet of plain glass. Perhaps those who have made much use of the Paget color-plates will have noticed the remarkable freedom of the negatives from pinholes due to dust, even when the plates have been carried about under conditions such as motor-touring, when it is difficult to preserve the emulsion-film in the ordinary way free from stray particles. The use of a plain cover-glass presents no inconvenience, at any rate when using the book-form plateholder, beyond that of requiring the requisite allowance for focus, in correspondence with the shifting of the sensitive surface farther back by the thickness of the glass. As a rule, reversal of the focusing-screen in its frame is a perfectly satisfactory form of compensation.—*British Journal*.

To Unscrew a Tight Lens-Combination

THE following is a good method of unscrewing a tight front or back-combination of a lens. A piece of artists' soft india-rubber, larger than the diameter of the lens, is taken, and placed on a table with the combination to be unscrewed resting on the top of it. The lens is pressed firmly down into the rubber and, at the same time, the hand is turned from right to left, when it will be found that the part in contact with the rubber

will be unscrewed. There is no danger of injury to the glass or metal of the lens.—R. M. CLOSE, in *Amateur Photography*.

An Early Photographic Suggestion

AN interesting communication touching the origin of photography was made at the monthly meeting of the Société Française de Photographie by M. Potonniée. Early last century Daguerre was showing his diorama, a form of entertainment which had an immense vogue at the time. The diorama consisted of a panorama background painted on canvas which revolved on rollers. In front, various objects were placed which gave the illusion of stereoscopic vision. Daguerre noticed that a rudimentary image of these foreground-objects impressed itself on the canvas where iodine had been used in painting, and this gave him the idea which has given us modern photography and the kinema. M. Potonniée, after much research, has established that the site of Daguerre's Diorama was near the Place de la République, at the corner of the Faubourg du Temple and the Rue de Malte now occupied by barracks. The committee of the Société Française was authorised to approach the Paris City Council with a view to placing a commemorative plate on the site.—*Daily Mail*.

Pat and the Photograph

THE photographer's clerk was preoccupied showing some samples of work to prospective sitters when Patrick Maloney intimated that he would like to know what pictures were worth.

"Like that, five shillings a dozen," said the girl, handing him one (a photograph).

Pat gazed long and earnestly at the photograph of a very small baby sitting in a wash-basin.

"Shure, now," Pat shyly asked, "phwat would it cost to take me wid me clothes on?"—*Kreolite News*.



THE CRUCIBLE

A MONTHLY DIGEST OF PHOTO-TECHNICAL FACTS

Edited by A. H. BEARDSLEY



Careless Focusing

It is not uncommon in modern portraits to find that those parts of the image which one would expect to find the sharpest not so well defined as other points where sharpness is not essential, avers *The British Journal*. For example, we recently saw a bust-portrait on which the sharpest definition was on the necktie, the eyes being noticeably unsharp. If this occurred regularly, one would suspect either imperfect correction of the lens or lack of register between the focusing-screen and slide. Occurring occasionally, it can be due only to one of two causes, either carelessness in focusing or a slight movement of the sitter between focusing and exposure. Either of these contingencies can be avoided by exercising a little care. With the present tendency to reduce the exposure to the shortest limit, it is usual to work with very large apertures, and when the lens is of considerable focal length, there is very little depth. To ensure absolute definition in the right place, it is advisable to use a proper focusing-eyepiece, which also prevents eye-strain on the part of the operator. Shifting of the head may be almost always avoided by posing the sitter in a comfortable position so that he is not tempted to relieve any muscular strain.

A Simple Method of Tank-Development

EDITOR PHOTO-ERA MAGAZINE:

The system as outlined by Mr. Frederick C. Davis in his article, "A System for the Tank," September, 1919, PHOTO-ERA, seems to me to be rather complicated. I have a "system" which I have used for several years. In fact, I develop hundreds of rolls of films each season without once referring to the table given in Mr. Davis' article. By simply bearing in mind that for each degree of temperature below normal—65 F.—one minute is added to the normal—20 min.—time of development and that for each degree of temperature above normal one minute is deducted from the normal time of development, no trouble should be experienced to estimate the correct time. If the thermometer registers 55 degrees, which is 10 degrees below normal, add ten minutes to the normal time of development. If the temperature be above normal, deduct the difference. Simple? Yes, very!

ANON.

EDITOR PHOTO-ERA MAGAZINE:

To the amateur who does not care to buy the chemicals and prepare his own developer and yet who wishes to obtain the same results as though he did, I wish to say that I have been using Eastman 5 x 7 pyro tank-developer for two or three years in the trays at 67° and have had great success with it. It is cheap and put up in boxes—six powders in a box—and each powder makes from 12 to 24 oz. of solution, according to the class of negatives one wishes to make. One powder in 12 oz. of water will give a good strong negative. As a rule, use 16 oz. of water, which gives more graduation of tone. One box at twenty-five cents will make from 90 to 124 oz. of solution; but it will not keep after the water is added to it. After using it for thirty or forty-five minutes it should be replaced with another quantity.

H. E. BLESS.

Determining Exposures with Reflecting-Camera

THE length of exposure with a reflecting-camera, by merely judging the degree of brilliancy of the image, requires experience. This method of determining the correct amount of exposure of the plate or film, however, is not as sure as the one of consulting a reliable meter, such as the Burt, Harvey or the Relio Exposure-Scale.

Besides, if the professional's method of noting the brilliancy of the image on the ground-glass of a reflecting-camera is adopted, it is necessary that not only the lens, but the mirror and groundglass be absolutely free of dust, dirt or mist. They must be absolutely clean, otherwise the image will be less bright and not commensurate with the brightness of the scene that should be reflected on the groundglass. Thus, if—when the lens, mirror and groundglass are scrupulously clean—the reflected image indicates an exposure of 1/50 second, the same camera-subject with similar conditions of light, atmosphere, distance and diaphragm, but the lens and the two reflecting-surfaces covered with dust, would require a longer exposure—say, possibly, 1/35 second or even more.

But even when resorting to the use of an exposure-meter, it is evident that the lens, itself, must be kept constantly clean, not to forget the misty covering due to sudden changes of temperature during cold weather.

Combines X-Ray and Motion-Picture

A COMBINATION X-ray and motion-picture apparatus, it is announced from Paris, is the invention of Drs. Lorman and Comandon. With the combined apparatus, pictures of animals can be thrown on the screen and the movements of the various organs shown. It is expected that, with modifications, the apparatus can be used with human beings as the objects photographed.

A Hint for Flashlight-Photographers

THE use of sufficient flashlight-powder to yield fully-timed negatives results often in rather strong shadows. In portraiture, where delicate diffused lighting is preferred, this is not wanted, and the only means to remove the sharply defined shadows is by painstaking retouching, which is by no means easy to do. Recently I hit upon the plan of causing the light which falls on the subject to pass through a piece of white goods, and this diffused the light sufficiently so that the shadows were pleasingly blended into the highlights. By sewing a large handkerchief on a wire-frame, which can be easily made, this simple diffuser can be held before the flash-lamp when setting the powder off. With a more complex shaped wire-frame, the frame may be fastened directly to the lamp in such a way as to keep the goods always between the powder and the subject. It is handy, when the detached screen is used, to open the shutter first, pick up the screen quickly, hold it before the flash, spring the lamp, and then close the shutter. This can be done very quickly. The photographer who makes portraits by flash-powder will find this hint very helpful.

FREDERICK C. DAVIS.



OUR CONTRIBUTING CRITICS



YOUR CRITICISM IS INVITED

Whoever sends the best criticism (not over 150 words) before the twentieth of the current month, will receive from us a three-month subscription to PHOTO-ERA MAGAZINE.

The winning criticism, in our opinion, is the first one printed below.

This poor print has no center of interest, no thought of composition, no attempt to tell a real story. What has the young lady been doing? Where is she going? The blurred, confusing background makes it hard to detect the outline of the figure. A more suitable, less spotty background should have been produced. The print also appears to be slightly out of focus. The dog is in anything but a pictorial position. Why was the lady not seated on a rock or stump, with the animals placed about her as if she were playing with them, her face suggesting an expression of pleasure? Why not a harmonious background and foreground, and why are the feet missing? Why should the whole menagerie be held in the lady's tender hand? The dog could stand alone, a cat in her lap, etc. Then, with such a title as "A Restful Pause" or "A Moment for Play," supply the idea. The Editor's plea for moderation is well meant and, itself, gallant; but this print deserves all the healthy knocks it can get.

FREDERICK C. DAVIS.

This print has both good and bad features. Unfortunately, one very bad one predominates. The blur of light through the unfocused background not only distracts attention, almost to the exclusion of everything else, but causes the outline of the right shoulder to practically disappear. Stopping down the lens would have helped this some; but the real

remedy would have been to move the subject to the right so that a smoother background would have been obtained, or to choose an entirely different one. The boot-tops and knee-pads on the breeches are also very distracting, and print should be trimmed above the top of the pads, and then some taken off the left to balance the shape. The animals are carelessly arranged, and a little effort should have made them more interesting. Except for the background, the tone and contrast of the picture is very good, especially the shadow-tone under the hat-brim. The eyes looking down lead the center of interest to the right place, but then it is spread between three animals. Only one of these should be looking directly at camera.

F. S. DELLENBAUGH, JR.

A BACKGROUND such as this is always an annoyance; with experience the photographer will learn that it is much simpler to select a background of solid tone, than to remedy the mistake after it has been made. In simple cases, the white spots may be removed by working on the negative; but it is often advisable to work on the print. It is quicker to use an air brush and obliterate the details of the background entirely, than to spot in all the light patches by hand. A new negative may be made by copying the retouched print. An alternative method is the use of a sketched-in background. The carriage of the young lady is particularly graceful, and we could excuse the downcast eyes if the attention of the pets were directed to better advantage. If the young lady raised her eyes, there might even be a diversion of interest.

WINN W. DAVIDSON.



THE PICTURE CRITICIZED THIS MONTH

THE essentials of this picture are the lady's face and the three animals; consequently, an oval mask cutting off $1 \frac{32}{100}$ of an inch from the top, $\frac{3}{4}$ of an inch from the left, $\frac{11}{16}$ of an inch from the right and $1 \frac{11}{16}$ inches from the bottom discards all that is not only unnecessary, but distracting. This, happily, would remove the dog's tail from the picture as it destroys the balance and, owing to its similarity to the background, might be confused with it. A further improvement could be made by retouching the background by darkening it, behind the lady's right shoulder (left of picture) and both arms as they are nearly lost against the whiteness. Had the exposure been longer, I fancy that the detail of the kittens' coats and eyes would have been clearer and the result even more pleasing.

J. C. THYGESEN-SCHMIDT.

Reproduction Encore

THE front-cover of PHOTO-ERA for April, adorned with Mr. David J. Sheahan's exquisite landscape, was not repeated on the inside of the magazine. As most readers of PHOTO-ERA bind their copies, we have been requested to publish Mr. Sheahan's picture on an inside page of an early issue of this magazine. We have arranged to do this in one of the future issues of the current year.

Trouble in New Jersey

MANY readers, competitors in particular, may doubt it, but the fact is that the PHOTO-ERA jury had no easy time to reach a verdict in the "Nature-Studies" competition. The remarkably successful picture of the blacksnake, by Dr. J. B. Pardoe, which received the third prize, was at first deemed worthy of the first prize. But when originality and beauty were taken into consideration, why, "The Intruder," by Thomas Elsum, was awarded the highest honor—after an expression of genuine admiration for Dr. Pardoe's technical achievement. Then came the question of conceding the second prize to the gracefully assembled blacksnake; but then came the strikingly original butterfly with its shadow on the sand—so simple and yet so effective and pleasing, that the winged insect took the prize away from its mortal enemy.

They may talk about the high cost of living, paper-shortage, coal-famine, sugar-boycott, overall-menace—all these incidents are nothing compared with the convulsion that is likely to shake the little state of New Jersey, the home of the winners of the first and third prizes in the Nature-Studies competition. Mr. Elsum dwells in Newark and Dr. Pardoe in a lovely little town only twenty miles away.

Do not neglect to read notice, printed elsewhere in this issue, of increase in PHOTO-ERA's subscription-price!



OUR ILLUSTRATIONS

WILFRED A. FRENCH



"That man is an artist!" I exclaimed, as I beheld for the first time a newspaper reproduction of the portrait of Doris Arden which adorns the cover-page of the current issue. This tribute was paid, with an intelligent understanding of the meaning of the loosely used term, "artist," to Edward Thayer Monroe, the master-photographer who has recently attained a place in the sun. The striking boldness and breadth which distinguish his portrait of this musical comedy artist must appeal to every admirer of photographic art, and create a desire to learn something of the history of Mr. Monroe as a portrait-photographer. Unfortunately, I can supply no information regarding his efforts to become the successful craftsman that he is, except that his portraits of members of the theatrical profession have appeared in popular magazines and in the daily press, and that his studio is at 45 West 46th Street, New York. A glance at our picture informs the initiated that the pose was improvised by the studio-artist with accessories probably kept on hand for the purpose. The whole effect gives evidence of resourcefulness, temperament and skill. The picture is repeated on page 302. Data: 8 x 10 studio-camera; Eastman Portrait-Film; pyro; contact Artura print, 12-inch lens, F/4.5; wide open; June, 11 A.M.; 1 second.

Miss Doris Arden has been appearing recently, in the leading ingénue rôle of "50-50 Limited," a musical comedy, with Herbert Corthell. Miss Arden is a very talented young actress, with a beautiful soprano voice and ability to a marked degree as an aesthetic dancer.

Although the pictures that accompany Mr. Rypinski's sketchy account of the recent Pittsburgh Salon would seem to need no further comment, I cannot refrain from adding a few remarks. A still-life—the frontispiece—is remarkable for the beauty and simplicity of composition. It is a superb arrangement of but three objects—bowl, string of beads and vase, which are ample to carry out successfully an artistic design. It is an object-lesson to workers—and, particularly, to artists of the brush—who seem to have a passion for a multiplicity of objects and thus overcrowd the picture-space.

While "simple and natural," Princess Ojira might have been posed more advantageously—with a view to giving less emphasis to the line from the forehead to the tip of the nose; for profiles are not always beautiful.

As a character-study, the portrait of Counselor L. shows a remarkable degree of force, breadth of treatment and fine modeling—qualities difficult to obtain except by an artist of rare ability.

Mr. Porterfield has been seen to better advantage than in his landscape shown on page 278. Here is a superabundance of material, beautiful as it is, and the design does not seem to carry the conviction of dignity by simplicity, which is a marked characteristic of his landscapes. "The River," as Mr. Rypinski truly says, is an exquisite bit; yet one would wish that the group of trees were without the company of the trunk at the extreme left. It gives the picture an unfinished appearance, and it would not be missed if removed by handwork in the negative.

Too much praise cannot be given to "Ripe unto the Harvest," by H. Y. Simmons.

I am glad that the reviewer notes that "The Valley of Carmel" is a pleasing departure from the artist's usual view. Not that Mr. Edwards' customary style is not a constant source of pleasure to his friends, but it is interesting to observe his versatility of artistic expression.

Daisie B. Chapell's "Family-Group," page 284, is remarkable in the successful arrangement and the uniformity of color of its members. It is a very favorite theme with nature-camerists, but not always easy of execution. Data: Indoors; May, 1 P.M.; north-window; 1 second; 6½ x 8½ camera; R. R. lens; 6½ x 8½ Seed No. 27; pyro; Artura C. contact-print.

The two examples of camerists' coöperation with a city's municipality in civic improvement, pages 287 and 288, are evidence of public spirit as well as of effort towards artistic success, although the main object is to supply photographic proof of existing conditions in the public park system. What is the record, in this commendable activity, of camera clubs in other communities? Data: Military Park, page 287; August, 2 P.M.; bright light; 1/25 second; 3A Kodak; 3¼ x 5½; Kodak Anastigmat lens; 6½ inch focal length; stop, F/6. Eastman roll-film; M. Q. Glossy, P. M. C. print.

"The Aristocrat," page 290, represents an eminently artistic portrait of a dog, and is a credit to the executive ability of Mr. Weed. A finer animal-picture never graced the pages of this magazine. The original print gained Honorable Mention in the "Miscellaneous" Competition for Advanced Workers, May, 1919. Data: April, 3 P.M.; good light; 3¼ x 4¼ Graflex Camera; 5-inch Cooke, F/4.5; stop, F/6.3; 1/90 second; Hammer, Red Label; pyro-soda; print on Artura Black Studio Special.

Ward E. Bryan's Honorable Mention picture, page 292, "Sunset on Lake Keuka," is a veracious portrayal of the scene. It has been enhanced by the introduction of human interest placed judiciously in the well-proportioned picture. Data: July, 7 P.M.; fading light; 2½ x 4¼; 2A Brownie; 1/25 second; Eastman N. C. film; pyro; Enlarging Cyko print; M. Q.

A sincere lover of nature, Bertran F. Hawley has shown in his Canadian woodland-scenes a marked sense of beauty, which is reflected also in his interesting and helpful essay—pages 293 to 298. Data: "The Camp for Dinner"—October; about noon; sun behind drifting clouds; 6 7/8-inch lens, f/6.5; stop, F/11; Ideal ray-filter; 1/5 second; 4 x 5 Royal Polychrome Plate.

"Overlooking the Forest"—November, 11 A.M.; bright sunlight; same lens, stop, filter, plate (3¼ x 5½) and exposure.

"Hunters in the Hills"—same as preceding, except at 2 P.M. and 4 x 5 plate.

"The Camp in the Forest"—same as preceding, except, with cloudy day and deep valley, 10 seconds.

"The Call of the North"—same as preceding; but bright sunlight; 1/5 second; diffusion in enlarging.

Although an excellent reproduction of a superb photographic print, the picture of Japanese cherry-blossoms in Potomac Park, Washington, D.C., page 299, suggests only in a mild degree the exquisite beauty of the original scene. From an artistic viewpoint this curving row of trees in their spring dress of deli-

cate pink makes a graceful foil to the straight and lofty Washington Monument. These trees were a gift of the Japanese government to President Taft, about twelve years ago, and they were planted around the Tidal Basin and along the Speedway in Potomac Park. Data: April, 1920; 3 P.M.; cloudy and bright; $6\frac{1}{2} \times 8\frac{1}{2}$ view-camera; $9\frac{1}{2}$ -inch Zeiss Tessar; stop, F/11; K2 color-screen; 1 second; Eastman Portrait-Film; M. Q.; enlarged on No. 6 P. M. C. Bromide. Enlargements, at \$1.50 each, and, colored, at \$4.00 each, may be obtained from E. S. Shipp, 1237 Harvard Street, N.W., Washington, D.C.

"Trapdoor-Spider,"—three illustrations by Mr. Webb, page 301. Data: "Open"—11 A.M.; bright sunlight; $3\frac{1}{4} \times 4\frac{1}{4}$ Voigtlander Alpine Camera; Collinear lens F/6.8; stop, F/28; 1 second; on half of a $3\frac{1}{4} \times 4\frac{1}{4}$ Central Comet plate; half of the plate was covered with black paper and two exposures made on the one plate; pyro.

"Closing"—about 11 A.M.; same camera and lens; stop, F/6.8 (full opening); 1/200 second; extra sunlight reflected on the subject with the aid of two mirrors; half of an Imperial Special Rapid Ortho $3\frac{1}{4} \times 4\frac{1}{4}$ plate; pyro.

"Closed"—After 11 A.M.; other items same as in "Open," except that the direct sunlight was screened off and sunlight reflected with a mirror so as to get more suitable light to show up the outline of the closed lid. All three prints were enlargements.

Advanced Workers' Competition

THE entries in the "Nature-Studies" competition were conspicuously varied in character, the subjects being taken indiscriminately from natural history—according to the list of suggestions printed in the February number. However, pictures of living creatures found more favor with the jury than studies of flowers, mushrooms, etc.

Originality and beauty of design, consistent with good technique, is esteemed of greater importance than mere technical perfection, in making the awards in these competitions. As an example of successful workmanship, the picture of Dr. Pardoe's blacksnake was considered preëminent. It would be difficult for any technician to surpass it. Yet, in the opinion of the jury, "The Intruder," by Thomas Elsum, took precedence over this achievement, as well as over all the prints submitted; thus it won the highest award. Any painter of animal subjects would be delighted with so unique and engrossing a theme as "The Intruder."

The jury was so impressed with Mr. Elsum's remarkable picture that we asked for a detailed recital as to how the picture was made. The story is as follows: "My curiosity had been aroused for some time by the actions of a little hawk that had been flying about my place, generally alighting in one particular tree where he would sit like a Sphinx, apparently watching some sparrows that were feeding on the ground beneath him. When they discovered their danger, they would scurry away. Whether he ever succeeded in pouncing on one of them for his breakfast, I never found out, but thought that if I could confine him to a certain space, I might be able to photograph him. There seemed to be only one available spot where the camera could be placed, and that was very close to the tree. The lens covered only just what is seen in the picture. In order to confine him to that space, I baited the limb with a small piece of raw meat. After doing this for several mornings, I found on my return from business that the

bait was gone. Whether he or the sparrows got it, was a mystery.

"One day, while at home, I made up my mind to watch and see. After placing the bait as usual, I focused the camera on the limb, used a generous opening of the lens, and prepared for a picture. I placed a small weight on the frontboard to which was attached a thread, so that a slight pull would drop the weight and release the shutter. I carried this thread back to a spot where I could conceal myself and waited for my friend to appear. After waiting some time, I saw him circle around and finally alight about where I thought the bait had been placed. He sat there some time, perfectly still. I hoped for a picture that would show some action. I had set up my camera and composed my picture, as well as I knew how, and now all I needed to complete my composition was the hawk and, perhaps, one of the sparrows to balance the picture. I knew what was needed; but would the fates smile upon me? I had devoted much time, thought and patience to this undertaking and I hoped that I could obtain the picture I had visualized.

"Suddenly, there was a flutter of his wings as if he wished to fly away, and I released the shutter. I came out of my hiding-place and, of course, he flew away. I took the camera to the house, into the darkroom, and proceeded to develop the plate. To my amazement I found I had 'bagged' two birds with one shot.

"I came to the conclusion that the little 'Intruder' must have known how much he was needed and just dropped in for a brief moment. It surely was a surprise-party for us all. However, the hawk, always on the alert, was quick to take advantage of the situation. He struck an attitude and from his expression, he seems to say, 'Hands Up!' The poor little sparrow looks to be 'shimmying' with fright.

"As we know, that composition is the groundwork of a picture, I give full credit to the sparrow for helping me to secure a picture that I had conceived and toward the accomplishment of which I had given considerable thought and patience."

Kenneth D. Smith's discerning eye, rare patience and consummate skill produced as delightfully original a picture of a moving butterfly as has ever appeared in PHOTO-ERA. The successfully artistic placement of the beautiful creature and its shadow is masterful, and merited unstinted admiration of the members of our jury. A source of wonder, too, is the perfection of the pictorial design made possible with virtually only one object, the shadow being subsidiary—an accessory, so to speak.

Data: May, 1920; Graflex $3\frac{1}{4} \times 5\frac{1}{2}$ with $7\frac{1}{4}$ -inch f.c. Tessar; made on shore of Schroon Lake, Adirondacks; 1/440 second at F/4.5; Wellington Anti-Screen Plate Backed; tank-developed with pyro; part of negative enlarged on Enlarging Argo Smooth Mat. Butterflies were drinking from the wet sand, and Mr. Smith approached within three feet, focusing Graflex on them. Then he kicked the sand, causing them to fly, and released shutter.

I have already spoken in terms of appreciation of Dr. Pardoe's remarkably successful portrayal of the blacksnake, which won him the third prize. The graceful arrangement of the reptile's attenuated body form—impossible of improvement by human hands—is a source of wonder. The artist—a copiously illustrated article by whom on the subject of photography of nature-subjects is being planned for July PHOTO-ERA—deserves great praise for the patience and ability exercised in producing so truthful and interesting a nature-study. Data: Bound Brook, N.J.; June, 11

(Continued on page 322)



ON THE GROUNDGLASS

WILFRED A. FRENCH



A Not Uncommon Experience

H. A. COLLINGS, the popular genial and highly efficient Eastman demonstrator, with headquarters at the Robey-French Company, Boston, is always ready with a good story. The following one is the latest in his sumptuous *répertoire*.

One of his customers—whose identity and locality he positively refused to disclose—found that he needed a receptionist for his growing business; so he advertised for one. The first applicant for the position possessed such an attractive personality—and that was not all!—that he engaged her on the spot. "And will everything be satisfactory?" asked the pretty applicant. "Sure it will!" promptly replied the studio-proprietor, adding significantly: "Of course, I'm only human." "Oh, that will be all right," smilingly remarked the new receptionist.

The studio-proprietor told the truth; for the very next day his face looked like the new map of Europe and his right optic was closed for repairs.

A Rather Difficult Prescription

GIFTED, as he is, with a well-nigh inexhaustible fund of humor, the "Walrus" seemed to fall short of his best efforts in satirizing an article by a *confrère*, in a recent number of *The Amateur Photographer*. One of his paragraphs begins with a quotation—"Sporting dogs can be taken lying in long grass." Other than remarking that other dogs must have short grass, the "Walrus" was silent on the feasibility of so heroic a treatment. The humor suggested by the situation seemed to have escaped the usually keen perception of our overseas humorist. Fancy a person lying in long grass swallowing live dogs. Whether such a substantial remedy will effect a cure, is extremely doubtful—unless, perhaps, the canines to be interned be in the form of fancy crackers, in which case, they would scarcely obstruct the patient's digestive apparatus. Surely the "Walrus," who modestly refrained from mentioning his own gorging capacity, did not extend himself in this instance. Perhaps, such favorite delicacies, as "hot" dogs, may still be unknown to our English cousins.

"I Never Thought of That!"

WHETHER in all seriousness or otherwise, a correspondent asks me to identify the writer of articles from whose practical pen, over the initials B. J., have been quoted frequently by the American photographic press. B. J.—let me think; just a moment, please. Oh yes; why, of course, it's Belle Johnson, the well-known photographer of Munroe City, Missouri. As I am dictating this illuminating bit of information, my right-hand man ventures to suggest that the writer in question is English, not American. This interruption is akin to a life-saver, and I hasten to acknowledge it as such. Although these two initials are strangers to readers of PHOTO-ERA, I recognize them. How stupid of me. They stand for *British Journal*, the veteran English authority in matters photographic.

A Lecture on Photography and its Unexpected Ending

IT is amazing how many persons, particularly women, there are who deliver papers or lectures on subjects about which they do not have the least knowledge. In order to comply with a request from the chairman of the entertainment committee of a club, to which they belong, to prepare and deliver a paper—subject immaterial, so long as it is entertaining and instructive—these good, obliging souls frequently will select a topic with which they are entirely unfamiliar. If it be one of an historical nature, such as Queen Elizabeth or the Pilgrim Fathers, it is merely a question of consulting some standard book on history; but if it be one on the arts or sciences, embarrassing difficulties are likely to arise, unless the lecturer happens to possess sufficient practical knowledge to warrant the choice of such a topic. I have heard of cases in which the speakers either selected, or were assigned, some phase of the Great War, and not only obtained their information from unreliable sources, but were hopelessly at sea, when questioned by members of the audience at the conclusion of the lecture.

Such a case came to my knowledge recently. The heroine, a lady of seeming intelligence, came into my office, not long ago, and asked for a book on "colored photographs." Being very busy at the moment, I was unable to discuss the matter with her, but referred her to the only authoritative source at hand, viz., an article, in serial form, by B. I. Barrett, that appeared in PHOTO-ERA (December, 1907 to April, 1908, inclusive). A complete set of these issues happened to be in the office, at the time. My visitor was delighted, brought the five copies of the magazine and departed.

Not long afterwards, I learned that the good lady had read an admirable paper before her club, on the subject of coloring photographs. A well-known camerist, of my acquaintance, was in the audience in obedience to an invitation from the president to listen to a lecture on color-photography. He listened attentively to the carefully prepared discourse; but not a word about color-photography did he hear. When the lecture was finished, the chairman announced that the speaker of the evening would be glad to answer any questions from the floor. The camerist arose, and, referring to the numerous and admirably colored photographs that had been placed around the room, asked why color-photography had not been mentioned. The lecturer, not in the least embarrassed, replied pleasantly: "Why, I have just finished speaking on that subject." "Yes, very true," persisted the photographic expert, "but the lecture you were announced to give was on 'Color-Photography,' while you have been talking exclusively on colored photographs." "Well," remarked the lecturer blandly, "aren't they the same thing?" A thud and—curtain.

Another New Lens

ONE of our subscribers, believing that he has discovered something new, writes us from Coblenz that a convertible lens, with combinations of different focal lengths, is known in Germany as a "Satzobjektiv." Satz?



ANSWERS TO QUERIES



F. E. C.—Window-transparencies from original negatives may be made quite easily. All that is required is a good glass-negative, dryplates of low sensitiveness, a sheet of plain glass without imperfections, and a transparency-frame—a method which is quite simple and has been described fully, and several times, in *PHOTO-ERA MAGAZINE*. See articles in issues of March 1919 and May 1916—both by the Editor.

C. S.—To build an 8 x 10 View-Camera, you should first examine a model that suits you in every particular. Almost any large dealer in second-hand cameras, in your city, would be willing to lend you a used one for a few days for a consideration, in order that you might thoroughly examine it and make your own specifications. Unless you are a skilled cabinet-maker, it would not pay you to buy the material and take the time to make one, as you could, very likely, purchase such a camera at a very low price. There are, moreover, certain things to be observed, in building a camera accurate in every particular, that you might not know or observe. In the end, it might be well to adopt our suggestion and send for a bargain-list, which is published by every "second-hand dealer" advertised in *PHOTO-ERA MAGAZINE*.

E. T. T.—The Wetplate or the Wetplate Process referred to frequently, in the photographic press, is the Collodion-Process, used, professionally, since about 1848, and discontinued in the eighties, when it was quite generally succeeded by the dryplate. The wetplate was very inconvenient and "messy." The practitioner was almost invariably afflicted with blackened fingers, due to contact with the silver sensitizing-solution; and his process was jocosely called the "black art." The glass-plate was first thoroughly cleaned, then coated with collodion and, lastly, dipped, with the aid of a rubber "dipper," into a vertical glass "bath" containing the silver sensitizing-bath, where it was allowed to remain for about one minute. The plate, while still wet, was placed at once in the holder, and, before it had begun to dry in the least, was immediately exposed, as otherwise failure would result. The exposed plate was developed without delay in an aqueous solution of protosulphate of iron, acetic acid and nitric acid, fixed, washed and dried. If the negative, after developing, appeared to be weak, it was strengthened or intensified by "redeveloping"—which could be done even after it had been fixed. It was then thoroughly washed, and set up to dry.

C. D. W.—Making pictures from a boat requires careful attention to the shutter-speed and to the lens stops. Even on cloudy days, less exposure is required on the water than on land. Light is reflected from the surface of the water to an amazing degree. In most cases, the best way to control the exposure is to use a smaller stop. That is, if you are accustomed to use *F* 8 at 1/50 second, stop down to *F* 16. However, if it is necessary to use *F* 8, increase the shutter-speed to 1/75 or 1/100 second and thus prevent over-exposure. A cloudy day on the water will enable you to obtain many beautiful effects that cannot be had when the sun is shining brightly. Usually, a cloudy day is a quiet day and the play of light and shade on the water may be portrayed to advantage.

F. E. S.—Profitable motion-picture work in a small country town is doubtful. In the first place, to purchase the type of standard outfit that you will require to meet all requirements will cost about eight hundred dollars. In all probability, you would not have enough topical material to warrant the installation of a developing and printing equipment. Unless there is more going on in your town than is usually the case, you will exhaust possibly interesting material in a very short time. This, added to the necessity to send the negative-film away to be developed and printed, makes it virtually impossible to photograph and project on the screen a local event—no matter how interesting at the time—before it is too old to be of news-value. However, if your town has a first-class motion-picture theater with an enterprising manager, it might be possible to make some arrangement with him to use material which you might obtain in surrounding towns. Then, again, you might become associated with one of the large motion-picture companies which produce a weekly news-release and act as their local representative within a stated territory. In such an event, it would be necessary for you to "cover" all parades, fires, accidents and other events with the least possible loss of time and to see that each foot of the negative film possessed "live" news-value. To sum up the entire proposition, it would seem that you had better give up the idea, for the present, unless you believe yourself to be equipped artistically and technically to handle the matter with success. It would be better not to make the attempt at all, than to produce work not of the best. If you are a good "still" photographer now, you would only hurt your reputation by putting out motion-picture material not up to standard requirements.

The Origin of Northern Lights

THE origin of the Northern Lights or Aurora Borealis seems to baffle the efforts of scientists to solve. According to an article that appeared in the *Wiener Mitteilungen* (a photographic magazine), little is known of the cause of this beautiful nocturnal display; but its height above the earth's surface has been established by the late Norwegian physicist Birkeland. He employed the method for determining the height of clouds and other atmospheric phenomena, and at the same time made photographic exposures from two different points of observation, whose distance is well known. As the lower edge of the Northern Light is nearly always sharply defined, it was possible, with the aid of 2,000 successful photographic exposures, to fix with certainty not only the locality where the stars shone through, but the height of the Northern Light itself. The lower edge, in most cases, lies about 100 kilometers above the earth's surface, and below a height of 85 kilometers no Northern Light was determined. The height of the upper border differs in certain cases, but averages 300 kilometers above the earth.

The photo-dealer who has no time to read at least one good photo-journal will probably have more leisure a little later.—*The Spatula*.



EVENTS OF THE MONTH

Announcements and Reports of Club and Association Meetings, Exhibitions and Conventions are solicited for publication



Notable Exhibition of Photographs by F. J. Mortimer, F.R.P.S.

THE many admirers, in this country, of the pictorial work of F. J. Mortimer, F.R.P.S., will be glad to hear that a collection of about sixty prints by this distinguished English photo-pictorialist will be shown in the gallery of the Camera Club, New York City. This one-man show should take place during the month of June, provided the pictures arrive in time and are not delayed too long at the Custom-House, otherwise in July. At this writing, the pictures were still on the way from England. If all goes well, this event will be one of unusual importance, and a credit to Mr. Floyd Vail, of the print-committee—Camera Club of New York. Those who desire to take advantage of this important exhibition, may obtain particulars from the secretary of the Camera Club, 121 West 68th Street, New York City.

The German Photographic Fair

ACCORDING to the *Photographische Industrie*, the leading German periodical devoted to the photographic trade, a comprehensive photographic exhibition was to be held in Stuttgart, the capital of Württemberg, May 2-16. In view of the fact that the photographic industry has not received adequate prominence in general commercial "Ausstellungen," in the past—except at the famous International Photographic Exposition at Dresden, in 1909—the exhibition at Stuttgart will undoubtedly be an effort to present all phases of the photographic industry, including the latest improvements in apparatus, optical instruments, chemical specialties, printing-mediums and accessories. It is also intended that this exhibition shall be the means to bring together manufacturers, dealers and consumers and to establish closer relations than has been possible in the past. This does not look as if the Germans were unmindful of the future of an industry in which they have been brilliantly successful. They undoubtedly realize that the Great War which they initiated has taught their competitors valuable lessons and that they must bestir themselves if they would regain even a part of the commercial advantages they enjoyed six years ago.

Signs of Photographic Prosperity in England

THE recuperative power of the manufacturing industries of Great Britain since the war is a subject of admiration. The *Photographic Dealer* prints a list of new photographic business-firms which have been recently established in the United Kingdom. These new firms are capitalized at from one to fifteen thousand pounds sterling, and comprise the following classes: Manufacturers of photographic apparatus; manufacturers of photo-chemicals; manufacturers of optical goods; photographic dealers; photographic schools; photographic instructors; photo-engravers; agents for photographic supplies; dealers in kinema-apparatus and supplies; proprietors of photo-studios; photo-finishers, and dealers in pictures and photographs.

Most of these newly established firms are located in London; the rest of them are in Birmingham, Nottingham, Manchester, Tunbridge Wells, Cheltenham, Cardiff, Newcastle-on-Tyne, Selby, Glasgow and Dublin. Some of these establishments are old concerns which have been taken over by new companies.

We wish these new photographic firms all possible success, which they deserve for their determination, courage and hopefulness.

Print-Exhibit at the Camera Club, New York

AN exhibition of artistic photography was held at the Camera Club of New York, from May 11 to 31, 1920, comprising the work of Dr. A. D. Chaffee (forty examples) and of William Gordon Shields (forty-two prints). Dr. Chaffee's medium was entirely bromoil, and Mr. Shields' was represented by oils, gum and other media. Some of the prints had been previously exhibited here, in Canada and abroad. The exhibits were both excellent and the display largely attended.

Our Suffering Fellow-Photographers in Austria

A PERSONAL letter sent to the Editor from his photographic confrères in Vienna, indicates that the entire population, including the photographic workers, is suffering severely from lack of food, and he suggests that something be done, if possible, in this country to alleviate this sad condition. Thereupon the Publisher sent *at once*, and on his own account, a food-draft to Vienna, through a local Boston Bank. He suggests that similar drafts be sent by readers of this appeal.

It is not necessary to take the trouble to raise a special fund for this purpose, as it delays action. Any person who wishes to help in this matter, may obtain an American Relief Warehouse Food-Draft to the amount of \$10, or upwards, at any bank in this country, and send it to the person he desires to assist. Or, such a draft may be mailed to Richard Colditz, business-manager of the *Wiener Mitteilungen*, Graben 31, Vienna, Austria.

The American Relief Administration has established an American Relief Warehouse in Vienna, Austria, so that plenty of staple foods are obtainable, but only through the efforts of sympathizers in this country as explained above. Let all help who can!

How to Quench a Thirst

THE season is at hand when amateurs will be busy preparing photographs for their albums. If desirous to adopt some of the hints contributed by successful workers to photographic journals, they may chance to meet a hint suggestive of the recent prohibition-campaign, viz., "When dry, proceed to the next step." Of course, the writer meant to say, "When the prints are dry, proceed to the next step."

G. Hanmer Croughton

THE announcement of the death of George Hanmer Croughton, of Rochester, N.Y., April 15 last, comes to us with a sudden realization of the loss, to ourselves and the photographic profession, of a man whose individuality stamped itself, at once, upon all who ever had the pleasure to meet him, and to enjoy something of his genial personality.



Courtesy of Bulletin of Photography

THE LATE G. HANMER CROUGHTON

That hearty shake of the hand was the index of the heart which prompted it, and we became in a moment like friends who had known each other for years. Mr. Croughton was born in Lowestoft, England, April 14, 1843. His talent for drawing, early in life, enabled him to be admitted to the National School of Art, at the age of sixteen, later studying under Thomas Sidney Cooper, of the Royal Academy.

On his return, he settled in London and was engaged by Southwell Brothers, Royal Photographers, painting portraits of British notables and, by command of Queen Victoria, a portrait of herself. He also painted a portrait of King Edward VII. In 1872 Mr. Croughton was awarded a special first-class medal by the Royal Cornwall Polytechnic Society for his ivory miniatures. Later, he opened a studio of his own and obtained awards for exhibits at the South Kensington International Exhibition.

In 1876 he received awards at the Centennial Exhibition at Philadelphia. His success at the Centennial was the cause of his visit to America, where he was brought in contact with the well-known professional photographers. His home and business, of late years, has been in Rochester, N.Y. He was a strong advocate for the appreciation of art in photography, and during his life has written many papers on art and photography, both to the journals of his

native land and to the land of his adoption. Upon a number of occasions he was one of the judges for the picture exhibits at the P. A. of A. Conventions.

William H. Robey

MR. WILLIAM H. ROBEY, who passed away, at his home in Dorchester, Massachusetts, May 3, 1920, in his seventy-eighth year, will be remembered by many as a partner of the old Boston firm of Horgan & Robey, dealers in photo-supplies, who did business, for many years, at 38 Bromfield Street, succeeding Bryant & Codman. As a result of keen competition, and of a desire to retire from business in order to take life easily, the partners of the firm of Horgan & Robey sold out to the Eastman Kodak Company, of Rochester, New York, in 1902—which example was followed by the firm of Benjamin French & Company, of 319 Washington Street, Boston. These two firms were united under the name of Robey-French Company, which is owned, controlled and managed exclusively by the Eastman Kodak Company, of Rochester, N.Y.

Mr. Robey was a successful and popular man in the photographic trade, and was also a prominent member of the Masonic Fraternity.

The Great Photographic Fair—London

THE long-heralded Photographic Fair, London, April 16 to 24, 1920, has passed into English photographic history. To judge by the London photo-press, this display of the extent and prosperity of the British photographic industries was a brilliant success. It demonstrated to the world the supremacy of British manufacture of virtually every material, product and accessory used in the practice of photography. Not only that; but this exhibition of British industrial power was marked by eminent originality and taste in the appearance of each individual display—a sort of manifestation of joy and satisfaction in the ability to be independent of a former commercial rival. To be sure it was not, according to *The Photographic Dealer*, the greatest event of the kind the world had ever seen, for the annual conventions of the American Photographers' Association, held in the principal cities of the United States, for nearly fifty years, since 1870, have had as their chief feature photographic exhibits on a large scale, and in halls more spacious and imposing than Horticultural Hall, Westminster, where the recent English affair took place. And the wonderfully comprehensive International Photographic Exposition at Dresden, Saxony, in 1909, which lasted six months, if we remember correctly—and which was attended by visitors from all parts of the globe, should not be forgotten. However, our English cousins have every reason to be proud of their achievement, and we extend to them our hearty congratulations.

Among the exhibits notable for completeness and beauty were those of the Paget Prize Plate Co. (Paget Color Process and Paget Self-Toning Papers); Wellington and Ward (papers, plates and chemical specialties); Kodak, Ltd.; Kodak, Ltd., Wratten Division (Panchromatic Plates and Color-Filters); The Platinotype Co. (platinum papers); The Leto Photo-Materials Co. (Seltona Self-Toning Papers); Houghtons, Ltd., photographic manufacturers and dealers (Ensign and Ensignette Cameras); Butcher & Sons (Cameo, Carbine, Pressman and Klinax Cameras), also Serchell Developer; Marion & Co., Ltd. (Soho Reflex Cameras). Many of the specialties of the above-named firms are sold in the United States.

Our Illustrations

(Continued from page 317)

A.M.; bright light; Cycle Graphic $6\frac{1}{2} \times 8\frac{1}{2}$ camera; Protar lens; stop, 16; exposure, $1/5$ second; Standard Orthonon; Pyro.

As a complete and well-ordered composition, Mr. Stelcik's "Haytime," page 308, commands admiration. The placement of the team and its driver, the illumination of the figures, the atmosphere, quality and pictorial proportions—all betray the correct artistic instincts of this camerist. Data: July, 1916; bright light; 5×7 Conley camera; R. O. lens; stop, F/8; exposure, $1/100$ second; Standard Ortho; pyro in tray; print on Azo A. It serves here as an example of artistic interpretation of the subject, "Miscellaneous," which is the competition that closes May 31, 1920.

Beginners' Competition

As every reader familiar with the rules that govern these competitions knows, every entry must be accompanied by a signed declaration to the effect that every print submitted is the unaided work, throughout, of the sender. Entrants, whose work is known to the Editor, are not required to make such a statement; but in the Beginners' Competition it is imperative. Occasionally, an amateur worker will enter a print, sometimes two, and disregard not only this important rule—but other significant requirements generally, because he has neglected to familiarize himself with the conditions that are printed in *every issue of PHOTO-ERA, for his exclusive benefit*. Consequently, his print or prints will receive no attention, until he wakes up to the fact that possibly, he has omitted something, and starts an investigation. This makes for a material increase in the number of practical workers, and helps to convert mechanical snapshotters into real photographers.

Hence, the picture of an amateur, particularly of a beginner, that has known no outside aid, will be viewed with greater interest than one which is entirely or partly the work of the professional photographer. Thus the exceedingly attractive winter scene, by J. C. Bird, page 311, merits special consideration. The composition could be slightly improved by better spacing, and the trees and fence need not be of such an intense unnatural black. The sky with its fleecy clouds and the pretty shadows—owing to a desirable direction of the sun—are winning features in this interesting picture. Data: January, 1920; 3 P.M.; sunlight; 4×5 Rev. Back Graflex; $9\frac{1}{8}$ -inch Ic Tessar; stop, F/11; 3-time ray-filter; $1/10$ second; W. & W. Panchromatic plate; pyro; Artura Non-Cushing. Medium print.

In "Buffalo Harbor," page 312, H. F. Wegener shows good intentions. The view caught by his camera comprehends too much material, which is not always conducive to an artistic result, though the camerist may have tried to secure a typical aspect of the port. The mass of craft and buildings passes in a broad line through the center of the picture—area—a tendency which generally is well to avoid. More space at the top or, if you will, a deeper foreground! Also, in so small a picture (original print, about 5×8 inches) the diffusion seems excessive. Data: August, 5.30 P.M.; bright sun; $3\frac{1}{4} \times 4\frac{1}{4}$ Graflex; No. 2, F/4.5, Velcostigmat; at F/11; Cramer Inst. Iso; H Isos Ray-Filter; Metol-Hydro; enlarged on Artura Carbon Black.

Our Contributing Critics

THE picture generously submitted for public criticism contains an obvious and rather common fault—

one that has been mentioned very frequently in PHOTO-ERA. It is entitled, "On the Humber," and is by Dr. J. E. Horning, of Alberta, Canada. Data: August, 7.30 P.M.; brilliant light; 3A F. P. K.; ($3\frac{1}{4} \times 5\frac{1}{2}$); $6\frac{1}{2}$ -inch R. R. lens; at F/16; 8 seconds; Eastman N. C. Film; pyro-metol-hydro-soda; bromide enlargement, beautiful in tone.

Economic Method of Handling Films

PROFESSIONAL photo-finishers and users of films will find it to their advantage to investigate the merits of new simplifying and labor-saving devices made by a new and reliable firm—the National Novelty Company, of Minneapolis, Minnesota.

These devices or accessories, indispensable to the professional photo-finisher and welcomed by the amateur-worker, are advertised elsewhere in this issue. The manufacturers and their products, both, are highly recommended to us by prominent dealers who are selling them in large quantities and with entire satisfaction.

Prints of Scientific Photography

READERS of PHOTO-ERA Magazine will be interested to know that the Royal Photographic Society of Great Britain will hold its sixty-fifth annual exhibition in September and October of this year. In order that American scientific photography should maintain the high place hitherto held in this, the world's most representative photographic exhibit, the Eastman Kodak Company, of Rochester, New York, has arranged to collect and forward American work for the Scientific Section.

This material should consist of prints illustrative of the use of photography for scientific purposes; its application to spectroscopy, astronomy, radiography, biology, etc.

Those who are interested in this branch of applied photography should send prints—mounted, but not framed—to Mr. A. J. Newton, Research-laboratory, Kodak Park Works, Rochester, N.Y., to be received not later than *Thursday, July 1, 1920*.

All Right in that Case

MAUD—"I understand that you don't like to have men flatter you."

ETHEL—"Oh, I don't mind, if they happen to be photographers."

Camera-Vignetting

THERE are many modern workers who imagine that vignetting by interposing a serrated card between the lens and sitter is of quite recent origin. This, of course, is not the fact, because some of the earliest daguerreotypes were very delicately vignettied in this way, so that, after all, camera-vignetting antedates printing-frame vignetting by a good many years. There is one difference between the old and new styles which is worth mentioning, as it may be found that in some cases the old way is better. The old style was to use a vignette-card, which was similar to those used in printing-frames, namely, a rectangle with a serrated opening in the center; the modern way being to use a card with a serrated curve cut in one edge. The "all-around" vignette with either a white or light gray card will give some very attractive effects, especially where a slight sketchy background is used. The impression is that of a sketch-portrait upon a gray base, the highlights being, of course, white, a pleasant variation from the ordinary style.—*British Journal*.



LONDON LETTER

CARINE AND WILL CADBY



At Hammersmith, in West London, there is a very energetic photographic community whose activities often culminate in varied shows. It is known as the Hampshire House Photographic Society, and, lately, Mr. Frederick H. Evans has been induced to lend his valuable collection of photographs, or a part of it, all by experts in different processes, which has made an extremely interesting exhibition.

American readers may not know that Mr. Evans holds a unique position in the photographic world, here. Quite apart from his literary and musical attainments and tastes, which are fully developed, he has for many years been the unswerving champion of straight yet artistic photography, and platinum is his idolized medium. He has always been ruthless in exposing anything in photography that—if we may use an Irishism—was not photography. Fakes of any sort he abominates. He is not above, or below, pointing it out in public. It is difficult to describe him in a few words; but if one chanced, as we have done, to sit next to him at a lecture, his whispered bits of conversation were generally more engrossing, filled, as they always are, with reasoned and experienced thought, than the discourse we were supposed to be listening to, even though, as on one occasion, it was George Bernard Shaw who was speaking on photography!

We first met Mr. Evans at Mr. F. H. Day's rooms, in Mortimer Street, when Mr. Day came to England from the States to teach us some then modern American methods, both in pictorial photography and in the mounting of prints. From that day onward, we have always kept in touch with Mr. Evans' work. He is an all-around photographer, and has done some fine portraits; but his really strong point, and that by which he will always be known best and in which he is still unequalled by any other worker, is cathedral-interiors. So thoroughly has he saturated himself in the subject, that it has been truthfully said that he even portrays the *particular* atmosphere of each edifice.

And this is the man who, during the last twenty-five or thirty years, has collected prints from many of the well-known workers of the whole period, and it is from this unique horde that he has selected forty-three pictures to form the show at Hampshire House. Not a large number, it may be thought, but we must remember Evans is a severe and critical judge, and would not include anything that he did not feel was representative of either the process or the time of its production.

The plan of the collection is to show all the principal methods of picture-making, the examples being mostly by well-known workers in each process. Platinum, carbon, bromide, ozotype, photogravure, gum-bichromate, bromoil, are all represented. There is one platinum-print by Frederick Hollyer that was made forty-three years ago, and yet looks as fresh and new as if just out of the clearing-solution. Mr. Evans was persuaded to hang three of his own platinum-prints, all wonderful examples of what the process can do in the way of range and depth of tones, as well as perfect examples of the artist's methods of picture-making. R. D. Keene, F. H. Day, Eduard Steichen, Gertrude Käsebier, F. J. Mortimer, A. L. Coburn, W. Bennington, Pierre Dubreuil, and Abbott W. Youall complete

the list of the platinum-workers. Robert Demachy, Mary Devens and one of the present writers are responsible for the gum-bichromates; Malcolm Arbuthnot has two bromoils; bromide is represented by James McKissack, J. G. M. Grove, A. Horseley Hinton, B. Bower Mewburn, and the other of the present writers; while those who show photogravures are George Davison, J. H. Anderson, J. Craig Annan, J. Dudley Johnston and James Sinclair.

If a collection such as this could be amplified and brought up to date by the inclusion of specimens of the younger photographers' work, it would form a valuable and interesting reference-exhibition. Would that a suitable public home could be found for it!

The love of a gamble is hard to stifle in our race, especially under our present rather unsettled conditions, and our authorities are kept busy to see that the public does not indulge its sporting-taste. One scheme, however, has crept through—helped, no doubt, by its most worthy object (Settlements for Disabled Sailors and Soldiers) and its sponsor, Earl Beatty. Its name, "The Golden Ballot," and its five-shilling tickets are rather challenging; but luckily it has already secured all the money it was out to get, and is closed this week — a month before its time, so we hope that all is well.

The clever thing about it is the prizes. Some are money; but there are others given by business-people who sympathize with the object, and they are in kind. For instance, one prize is "Luncheon for Two at the Savoy every day for a Month," and another, "Weekly Flowers for a Year," and the interest to us was that some photographers have also been public-spirited, and offered "sittings" as prizes. We have even gone so far as to amuse ourselves by thinking of a mischievous fate that would allot the prize of "A Case of Louis Roederer Champagne" to a confirmed Pussyfoot, or "A Fortnight at Palace Hotel Mürren (return-tickets from London)," which Sir Henry Lunn is kind enough to offer, to a stay-at-home who loathes foreign travel.

l'ogque, one of the newer illustrated papers, devotes a good deal of space in a recent number to the Imperial War Museum Records. Its article is sub-headed, "Photography versus Art, Records that a Camera cannot give," and is illustrated profusely by reproductions from many war-paintings. One of the weak points in the argument is that no war-photographs are reproduced. Of course, we all know that from the point of view of composition, which covers most of the shortcomings of the camera at its best, the painting scores; but one looks in vain among these paintings for the little touches of reality, the realism of the weary attitude of the over-worked-soldier, for instance, that was so noticeable in many of the snapshots made at the front—the sort of thing that will tell our children's children something of the actual truth about the world-war. The writer derides the type of mind that would prefer a photograph of the Pan-Athenaic procession of Pericles' day to the Parthenon Frieze. Much as we prize this masterpiece, we must own that we should be tempted to sacrifice it for a batch of humble camera-snapshots of the same date, if such were to be got. Think what we should learn of the real life of the people if Kodaks had been in the hands of the few leisured and cultured individuals of that time!



BOOK-REVIEWS

Books reviewed in this magazine, or any others our readers may desire, will be furnished by us at the lowest market-prices. Send for our list of approved books.

BEHIND THE MOTION-PICTURE SCREEN. By Austin C. Lescaboura. 420 pages. Over 300 Illustrations from original photographs. Large octavo. \$4.00 net; postage according to zone; weight, packed, 3 lbs. New York, U. S. A.: Scientific American Publishing Co. (Munn & Co.) 1919.

According to the title-page, this superb work tells how the scenario-writer, director, cameraman, scene-painter and carpenter, laboratory-man, art-director, property-man, electrician, projector-operator and others contribute their share of work toward the realization of the wonderful photo-plays of to-day; and how the motion-picture is rapidly extending into many fields aside from that of entertainment. The book is, indeed, a book of screen wonders in which the author has tried to answer, in an authentic, comprehensive and yet highly entertaining manner the thousand-and-one questions that are continually occurring to the motion-picture devotees.

The first half of the book deals with the production of motion-pictures from the time the scenario-writer conceives the plot until the finished film is projected on the screen. The second half of the book is devoted to subjects apart from the production of conventional photo-plays, aiming, as it does, to promote wider interest in cinematography by telling of its vast possibilities in fields other than mere entertainment. Twenty-two chapters treat the following-named subjects: Working-Plans of the Motion-Picture; The Artist who paints the Film-Subjects; The real Role of the Picture-Actor; The Motion-Picture Camera; The Camera-Man and his Art; In the Land of Make-Believe; The Birth-Place of the Motion-Picture; The Generals of Shadow-Land; Tricks of the Screen; From the Camera to the Screen; Reporters of the Screen; Putting it on the Screen; Pictures in Natural Colors; Filming the World Invisible; Pictures that Talk and Sing; Cartoons that Move and Sculpture that Lives; Motion-Pictures in Strange Fields; Motion-Pictures in the Home and Business; The Present of the Motion-Picture Art, and The Future of the Motion-Picture.

There is no enterprise projected in the interests of public amusement that calls for the expenditure of such vast sums of money as the motion-picture field. The enormous salaries paid to film-stars is an indication of the hundreds of millions of dollars that are invested in the preparation of the elaborate photo-plays that enthral large audiences, night after night; or of exciting episodes, feats of daring and mysterious transformations that pass all comprehension of the average human mind. Naturally, the originators of these many startling and fascinating scenes prefer to guard their secrets just as long as possible; but yielding to an ever-increasing public desire, they have allowed the enterprising and persistent investigator to enter their sacred precincts with his camera, and reveal to the outside world the mysteries of motion-

picture production. The three hundred photographs that portray the activities of the actors and technicians in this marvelous industry, are the work of expert specialists and, in themselves, tell the entire intricate story. Opposite every page of text is a page with one or two pictures—truly a veritable pictorial feast! How so necessarily expensive a book can be sold at so low a price as \$3.50 is another cause for wonder. Every person, young or old, that is interested in the "Movies," can make no better investment than to procure a copy of Mr. Lescaboura's sumptuous and fascinating volume.

THE BRITISH JOURNAL Photographic Almanac, 1920.

Edited by George E. Brown, F. I. C. Price, paper-edition, 75 cents; cloth, \$1.50; postage extra, according to zone. New York, U.S.A.: George Murphy, Inc., 57 East Ninth Street, American Agents.

Better late than never! This applies to the current issue of the *British Journal Photographic Almanac* for 1920. Although it occupies the same bulk as usual, the reading-matter constitutes only about one-third of its contents, and consists of customary tables, formulæ, recipes and suggestions that are indispensable to the regular technician and to the photo-finisher. A large amount of the text is devoted to a number of chapters by the editor, setting forth "Beginners' Failures in Photography." These helpful chapters consist entirely of mistakes that occur in the manipulations associated with the development of plates and films, and those incident to printing-processes and to the mounting and dry-mounting of prints. Further chapters deal with apparatus and equipment, the photography of various subjects, aerial photography, the copying of prints and pictures, flashlight-photography, pinhole-photography, exposure, standard and other printing-processes, lantern-slides, color-photography on plates and paper, and miscellaneous subjects. Most of these topics are illustrated.

As this annual appeals largely to regular readers of the *British Journal of Photography*, the reader is often referred to specified issues of the B. J. for the completion of the description of certain processes. Thus, for instance, the simplified development of Autochrome plates is described in part only; and for the remaining processes—reversal and redevelopment—the worker is referred to the *British Journal Supplement*, of October 3, 1919, page 37. These abbreviated descriptions occur, of course, under the caption, Epitome of Progress.

The advertising-sections which precede and follow the text—and which constitute two-thirds of the bulk of the volume—appeal specially to camera-users and practical workers, inasmuch as they comprise illustrated descriptions of up-to-date cameras, lenses, and specialties of European and American manufacture. Scarcely a manufacturer or agent, whether European or American, is omitted.

In fine, the *British Journal Photographic Almanac* should be in the hands of every practical worker; and to every regular purchaser it is particularly important that a copy should be available, in order that his file may be complete.

By Degrees

AMATEUR-PHOTOGRAPHER (to his first model): "Excuse me; but isn't that costume extreme?"

Fair sitter: "This dress? Why, I put this on merely that you may become accustomed to the one I am going to wear for my next pose."



WITH THE TRADE



The Heyde Exposure-Meter

A NEW model of the celebrated Heyde Exposure-Meter is now obtainable from the American agents, Herbert & Huesgen Company, 18 East 42d Street, New York City. Particular attention is called by the importers to the fact that all the old models have been discontinued entirely and that there is but *one new model* will be supplied. The present model is much more simple than the former one. Instead of having twenty divisions to measure the light on the subject, the new model is divided into eight. The meter is small enough to be carried in the vest-pocket. An interesting descriptive booklet may be obtained by writing to the importers.

Tasteful and Attractive Show-Cases

EDITOR OF PHOTO-ERA:

In your admirable and timely editorial, "Individuality in Business-Methods," published in your interesting May number, you mentioned the importance of the photo-dealer arranging his wares artistically and temptingly in his show-window. I do not remember having heard of that idea before, and this is only one of your bright suggestions constantly appearing in PHOTO-ERA, doubtless from your fertile pen. Now, why isn't it a good idea for a studio-proprietor to follow? How many times have I *passed by* the show-case of a portrait-photographer. I stopped only a moment, and passed on. Why? Simply because the contents of the show-case were so messy—framed prints in black and sepia; framed miniatures; frames in narrow mouldings in nests, and lettered labels and notices, all arranged with little or no taste. Surely, the passerby would get no favorable impression of the artistic taste of such a studio-proprietor. Better, fewer things in the show-case; say, several neatly framed pictures, striking and attractive, and these changed, at least, each week.

H. M. SEAYER.

Coal for German Photo-Chemical Firms

THE English photographic press is keeping a watchful eye on German activities. While it is making great claims for the superiority of all English photographic products indiscriminately—which are warranted in a number of cases—it is a little apprehensive of what may happen on the other side of the North Sea when all barriers are down. It has been shown that even the English public cares little for sentiment, so long as it gets what it wants, the source or manufacture of the article being of little or no consequence.

The *Photographic Dealer*, the eminent English photographic trade-journal, informs its readers that the home of coal-tar products has made a contract for the delivery of about one hundred wagon-loads of American coal at a price of over 160 marks per cwt., payable in goods. The *P. D.* adds, with admirable nonchalance, that the chemical manufacturing industry in Germany was able to resume work March 1, 1920.

Electric Lamps in the Studio

AN interesting event of the Professional Photographers' Congress, held in London, April 19 to 24, 1920, was the demonstration of studio-lighting systems by Mr. Angus Basil. It was a *tour de force* in the way of demonstration, for in the course of the evening, Mr. Basil used four systems in turn to obtain the portrait of a lady-model. These systems were the mercury-vapor lamp, the Westminster single enclosed arc, the half-watt lamp, and the Marion "Northlight." He said that reflected light, to judge from the modifications which the makers were introducing in response to the wishes of their clients, was coming more and more into favor for portrait work. Reflected light would certainly give the most effective result. Virtually, all professionals who were going to make any great success, said Mr. Basil, would sooner or later have to install an electric lighting-system. The work of the professional, everywhere except at seaside resorts, got more and more round to the winter-months, when people were at home; and it was very necessary to have some form of lighting which would make them independent of daylight—vagaries, and, at the same time, would give effects approximating to daylight; for although in electric light the rays usually came from a point and went off at a very acute angle, yet by reflection softer and broader effects could be obtained.

Amateur Photographer.

"Here's the Answer."

UNDER the above-named title, the Abel Publishing Company, of Cleveland, Ohio, has compiled and issued a booklet, of ninety-five pages, devoted to seventy-five photographic questions with simple, direct answers. The subjects that form the questions and answers are taken from every-day amateur practice, but are also of use to professional photographers of inadequate experience. The topics of this little book represent mistakes that occur continually in technical operations; definitions of photographic terms, and the use of photographic accessories.

The casual worker, and eminently the beginner, will find it profitable to invest in a copy of this useful little work, the price of which is 35 cents.

Artistic Subterfuge

"If those photographs are done, I'll take them."

"Yes, sir. You understand, of course, that we do not deliver pictures until they are paid for."

"What! Why, when I sat for them you told me I might pay for them whenever I chose."

"Yes, but that was merely to make you look pleasant."—*Exchange.*

Self-Denial

WIFIE: "I saw a peach of a camera at Willoughby's today."

HUBBIE: "Well; did you buy it?"

WIFIE: "No, dear; I restrained myself and bought a hat instead."

Photographic Lenses

WE have before us a copy of the latest (1920) illustrated catalog of the lenses made by the Bausch & Lomb Optical Company, of Rochester, N.Y. The various types of the firm's lenses—such as the Tessar, in three series: F/3.5, F/4.5 and F/6.3; the Protar; Series VIIa, F/6.3; the B. & L. Medium Wide Angle, F/12.5; the B. & L. Extreme Wide Angle, F/18; the B. & L. Process Anastigmat, F/10, and the B. & L. Telephoto Attachment—are described at length, and illustrated with successful and illuminating photographs. The catalog concludes with illustrated descriptions of the firm's ray-filters, Volute shutter, condensing-lenses and magnifying- and reducing-glasses, followed by a complete price-list of all the lenses and other optical accessories mentioned in the catalog.

The first twenty-six pages of the catalog are devoted to practical information, of eminent benefit to the users of high-class camera-lenses, together with authentic definitions of optical terms in daily use by the advanced worker.

The catalog has been printed with extreme care and good taste, and is a credit to the firm's well-known high reputation.

Can a Firm Do Too Much Business?

LET us be charitable, and not be too eager to condemn or find fault, when replies are slow in forthcoming, for conditions are not what they used to be.

Advertising in PHOTO-ERA, particularly during the past two years, seems to have yielded an unexpected number of replies; so that certain manufacturers and dealers are unable to keep up with the demand. Two of our most consistent advertisers are crying: "Hold! enough!" for they have an accumulation of orders on hand, sufficient to last throughout the entire summer; and, on account of the lack of raw material—which, unfortunately, comes from the other side—are considerably embarrassed. They announce, however, that they will fill the orders in sequence—just as they are received. Dealers in second-hand lenses and cameras—such as the Bass Camera Company—will advertise among hundreds of others, one or two equipments of a certain model; which, owing to their popularity, bring numerous inquiries. It may thus not always be convenient to answer all these requests by return mail. This may be unfortunate, as the inquirer expects the article immediately and is naturally disappointed, for it was sold to the first customer. The dealer, meantime, hopes to obtain duplicates of the article in order to satisfy other customers.

As for the Editor: he is literally swamped with inquiries of all kinds, which he does his best to answer. He is supposed to answer every question in the photographic dictionary; and a given query is sometimes so out of the ordinary that several days may be required before he is in position to give a satisfactory reply. Then, too, the Postal Service is not exactly normal; and for this reason, as well, considerable patience must be exercised, while awaiting replies.

The New Verito Lens

DURING the past ten years, the Wollensak Optical Company of Rochester, N.Y., has probably done more to popularize soft-focus photography than any other firm in the optical industry. In making its Verito Diffused Focus F/4 lens, and by encouraging and instructing the photographic profession in its correct usage, this firm has succeeded in establishing in the

minds of the general public a genuine appreciation of the quality of image rendered by the soft-focus type of lens. The advantages of the old Verito Lens are already well known, as, for example, its convertibility with a rear focal length of about half again as long as the doublet; high speed of F/4; great reduction in the amount of retouching necessary; suitability for Graflex or studio use, or for enlarging where soft-focus effects are desirable.

Although the old type Verito has already established itself in high popular favor, the Experimental Department of the Wollensak Company has been constantly on the alert for any possible new improvement. It seems that it has succeeded in its endeavor to "better the best." A new Verito has been developed which has all of the characteristic qualities of the old lens but practically eliminates the slight halation that was sometimes apparent with the old construction. Furthermore, this lens will give a softness at F/4 that is about comparable to the old lens at F/6, the result of which is that the professional photographer and the advanced amateur using the soft-focus type of lens can employ the objective at its widest opening without obtaining a displeasing fuzziness. The new construction makes possible exposure at a great speed with no danger of double line, halo or mushy appearance. Unlike other soft-focus lenses, the new Verito renders the same image in the groundglass that it does in the finished negative.

In enlarging with the new Verito, it is unnecessary to use the diffusing-stops as in the old construction. The construction is such that a beautiful degree of softness is obtained in the enlargement without the stops, and the diffusion can be varied to suit the preference of the user. The old diffusing-stops which were numbered 1, 2 and 3 gave a diffusion which is comparable to the new Verito stopped to about F/8, F/9.5 and F/10 respectively, depending on the softness desired. The advantage of doing away with the stops lies in the fact that exposure is more than four times as rapid. Further particulars can be obtained from the Wollensak Optical Co. of Rochester, N.Y.

The Late Obrig Camera Company

THE camerist who has been accustomed to patronize the Obrig Camera Co., 147 Fulton Street, New York, upon his next visit will discover a change. The firm has ceased to exist. Inability to keep up with the rapid march of progress and to adapt itself to up-to-date business-methods was the cause. The firm bore an excellent reputation for integrity and good intentions, and made many friends among the retail-trade of Greater New York.



THE season for finishing the amateur photographer is with us. By "Amateur Finishing," it might be inferred that the amateur is finishing a piece of work, not that he is giving up the ghost. But, judging by the greed of certain unscrupulous photo-dealers, the unwary amateur is being, or will be, finished.

Another interpretation of the loosely expressed term, "Amateur Finishing"—provided it is written "Amateur-Finishing"—could be the finishing of work begun for him, viz., developing his exposed films and converting them into prints and, if desired, into enlargements. This work, or form of photographic activity, is known as "photo-finishing," the specialist being referred to as a "photo-finisher"—both terms having been coined by the editor of PHOTO-ERA about eight years ago and endorsed editorially by *The British Journal*.



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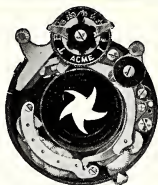
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To Contributors: Contributions relating to photography are solicited and will receive careful consideration. Preference is given to MS. that is typewritten, and to authors who are practical amateur or professional photographers.

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Catalog X describes the Verito fully and gives interesting lens data. Send a card for a copy.

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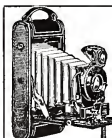
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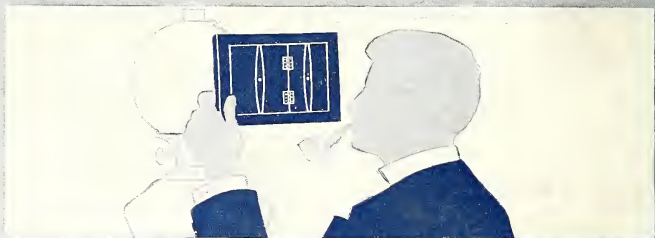


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